Obstacles on the path

An exposition of the experience of car-free living

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Bryan Patrick Lewis

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Abstract

The contemporary focus by local and central government on the promotion of sustainable transport options has highlighted the need for commuting to move away from the current dependence on private cars to more public and active (walking and cycling) modes of transport. Given the prominence of the motor car in personal transport options however, choosing to live car-free in this car dependent culture appears at first glance to be an irrational choice. This research explores the lived experiences of a group of Hamilton residents who have made such a choice. Using a grounded theory approach, the thesis presents the results of interviews with nine car-free Hamilton residents who shared their personal transport stories, which include their childhood experiences, but focus on their current everyday practices and experiences.

Through semi-structured interviews, the costs and benefits of a car-free lifestyle are articulated and analysed. Their motivations for choosing to forgo cars and their solutions for overcoming potential barriers to car-free living are also reported and explored. The collected data generated a range of themes which are presented in three chapters, each covering a specific aspect of the participants' stories. The first group of themes relate to the public sphere, the second to the private realm and the final group emanates from specific elements of car-free living that the thesis sought to clarify through the participants' stories.

The key finding is that living car-free within Hamilton City is viewed by the participants as a well reasoned and eminently sensible choice, which produces multiple benefits. In addition to their reduced environmental footprints, the participants value the social interaction associated with active and public transport. Their consensus is that they are healthier, wealthier and more involved members of the community. The most problematic areas of living without a car were associated with recreational and social activities, which often do not coincide with public transport

schedules or involve distances too great for active transport. The benefits far outweigh any disadvantages however, and ultimately, this thesis concludes that a motor car is not necessary for the everyday activities of urban living in Hamilton and any associated inconveniences are not as insurmountable as generally imagined.

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Chapter 1

Introduction

It is not a question of combating the automobile as an evil in itself. It is its extreme concentration in the cities that has led to negation of its role. Urbanism should certainly not ignore the automobile, but even less should it accept it as its central theme. It should reckon on its gradual phasing out.

(Guy Debord 1959 :57)

This research investigates the circumstances, motivations and experiences of people who have chosen to live without the convenience of an automobile. Through semi-structured interviews with car-free Hamilton residents, the benefits and disadvantages of a car-free lifestyle are articulated and analysed using a grounded theory approach. The most problematic areas of living without a car are associated with recreational and social activities, which often do not coincide with public transport schedules and routes or involve distances too great for active transport (walking and cycling, for example). None-the-less, participants are adamant that the benefits of their car-free lifestyles outweigh the costs. For example, the general consensus is that they are healthier, wealthier and more involved members of the community due to their decision to forgo motor car ownership. In addition to their reduced environmental footprints, they value the social interaction associated with both active transport and public transport. Ultimately, this research leads to the conclusion that for these participants a motor car is not necessary for the everyday activities of urban living and any inconveniences associated with a car-free existence are not as insurmountable as generally imagined.

Purpose of research

If living without a car in a car-dependent society is considered a hardship, if removal of driving privileges is imposed as a punishment and if the loss of the ability to drive is regarded as a handicap, the choice to severely limit or entirely forego the convenience and benefits of the private car suggests a degree of irrationality.

This thesis explores this less conventional viewpoint, investigating how car-free Hamilton residents perceive commonly cited barriers to alternative forms of transport. It presents their solutions as to how they control or overcome the implied or expected problems and hardships of living without a car in a car-dominated culture.

From a car user's perspective, there are many obstacles to car-freedom; many reasons that make it seem difficult or impossible to forego the use of a private car. For families with dependent children for example, the car is viewed as an essential tool of responsible parenting. It is not at all clear however, that such views are based on solid ground and the dominance of the car as the ideal form of personal transport needs examination in regard to whether car dependence is simply a rational choice, or is the result of some sort of collective blindness to the alternatives. That is, do motorists possess a false consciousness in regard to the benefits, conveniences and economics of the privately owned car as transport or is it car-free residents who are acting irrationally?

High fuel prices are currently providing an economic push factor (away from car use) and in conjunction with social, ecological and health pull factors, our dependence on cars as personal transport is beginning to be seriously challenged. Importantly, the growth in active transport options - cycling and walking, for example - and improved public transport systems and patronage are recognized as both desirable and necessary by central

and local governments, along with a growing number of residents. Therefore the viewpoints, perceptions and transport decisions of car-free residents provide valuable insights to guide the further development of both active transport and public transport.

Existing literature

An initial literature search found no references to car-free individuals, car-free living or car-free cities in New Zealand based research. Internationally (particularly in Europe) the promotion of and research into car-free living is well advanced. The transformation of Prague into a people-friendly, rather than a car-friendly city has been four decades in the making and provides a well-documented path for others to follow. The World Carfree Network, with headquarters in Prague, is the hub of the global car-free movement.

> *Worldcarfree.net is a clearinghouse of information from around the world on how to revitalise our towns and cities and create a sustainable future. In addition to serving the carfree movement, Worldcarfree.net offers resources for architects, planners, teachers/professors, students, decision-makers and engaged citizens. (Worldcarfree.net, para.1)*

Terms such as 'car-dependent cities' hint at the problems cars bring, yet suggest an inevitability in regard to car use and car culture. None-the-less, increasing numbers of books and other literature are being written with a focus on 'how to be' and 'why you should be' car-free or car-light, pointing out the pitfalls of car culture and promoting the savings in wealth and health achievable if car use is reduced or replaced (Alvord, 2000; Sloman, 2006; Vanderbilt, 2008). Similarly, in Canada, Todd Litman, from the Victoria Transport Policy Institute has also published many papers promoting the benefits of a balanced approach to transport problems as an advantage for all travellers and particularly of benefit to residents who live in car-free or car-light communities (www.vtpi.org, 1999). Australian researchers have produced a large quantity of work with regard to sustainable transport, with the work of Newman and Kenworthy being

particularly worthy of note. Challenging the misinformation or myths about car-based transport and the sustainability of cities in the face of our heavy dependence on the automobile as everyday transport is a priority in their work, along with a focus on overcoming these problems (Newman & Kenworthy, 1989, 1999, 2000).

New Zealand focused research undertaking international comparisons of urban transport efficiency in New Zealand cities with their international counterparts has found that our cities are inefficient and wasteful by comparison (Bachels, Newman & Kenworthy, 1999). A symposium on *Planning for and promoting cycling in urban areas,* held at the University of Waikato, Hamilton, October 1997, although focused solely on the bicycle highlighted the advantages of non-motorised travel in urban areas. It prompted further research in the form of a number of theses covering the themes of cycling and public transport in Hamilton (Birkhead 1995; Vare 1995; O'Callahan 1997). Research along similar lines was undertaken by Mairi Jay et al, on the theme of planning and transport, with an emphasis on the role of the bicycle in Hamilton City Council's strategic plans. Focussing on Hamilton city, their work questioned the implications and requirements of the Resource Management Act (RMA 1991) for sustainable transport within environmental planning policy (Jay 1997, 1998, 1999 & Jay et al, 1997, 1998).

Journals such as *Planning Quarterly* and *Transport Policy* have also provided useful background material on the topics of sustainable transport, car dependence and urban form, highlighting the complexity and number of problems and conflicts involved, particularly the need for people-friendly cities. The *Transport Policy* journal was especially useful in contextualising and confirming insights provided by the participants in this research. For example, Wright and Egan (2000) provided good background and verification of one participant's views on the need for the active 'de-marketing' of the car. Similarly, in *Planning Quarterly* discussion on the attitudes to public transport and the habits and behaviours of public

transport users confirmed some of the difficulties for non-metropolitan commuters in the small towns and communities that surround Hamilton City (Cheyne & Imran, 2009). At other times, the literature raised particular themes requiring consideration by both the researcher and the participants. For example, Freeman (2009) asks that planners 'recognise children as a legitimate focus in transport planning', raising the theme of children's place in 'traffic generation' and its consequences.

There are also many recent publications from central and local government that support active and public transport. The Ministry of Transport's *Getting there on foot, by cycle* (2005) and Hamilton City Council's (HCC) *Transport: a household guide to improving your health, saving money and getting around Hamilton better* (2005a) are just two examples of the increasing emphasis on alternatives to the private car and the promotion of public and active transport by local and national government. The conclusions of this thesis mirror the proposed advantages expressed in the HCC *Transport* booklet, with all the participants in this research confirming that they have improved their health and saved money by using active and public means of transport. They are also convinced that they navigate Hamilton more efficiently as a result of choosing to live without a car.

Internet sites focussed on sustainability have also provided much background material for this project. A search for 'one car families' produced many useful links with a large number of positive testimonials. The World Carfree Network (mentioned above), Livingstreets Aotearoa Inc. and the Cycle Advocacy Network all have comprehensive sustainable transport resources freely available. The Free-range kids website provides a very clear challenge to parents to allow their children greater freedom of movement within and around their neighbourhoods and encourages use of public transport even for younger children in order to foster independence and a positive sense of community. These themes resonate with the voices of the participants in this research.

Overall the experience of living without a car for most adults in New Zealand is unusual and for Hamilton residents it is rare. Therefore a paucity of literature presenting the views of those who are quite literally 'walking the talk' here in Hamilton is to be expected. This research seeks to remedy some of this omission and provide insights into daily transport for Hamilton residents who are not car dependent.

Theoretical perspective

The answer to the epistemological and ontological questions of 'how and what' is known in this research, is premised on standpoint theory. Essentially that the participants in this research are expert witnesses to the realities of car-free living in a car dependent society.

Originating from Hegelian philosophy *standpoint theory,* succinctly described as 'the view that knowledge is shaped by social position' (Hearn and Kimmel 2006: 60) purports to give more complete understandings of the social world. Just as feminists have argued that women's unique 'material situation gives them a different and better, understanding of the world or standpoint', so also the non-motorist has a unique and possibly more complete standpoint from which to view the modes and methods of transportation (Bryson, 2003: 65).

For the non-motorist the supposedly subordinate position they hold in a car culture may offer additional viewpoints and an increased understanding of the realities of travelling within any given community. The non-motorists greater immediate advantage in investigating and implementing alternatives to the car will foster knowledge and experience of a wider range of transport modes and choices, whereas the dedicated motorist may have a rose-tinted 'windscreen worldview' of the transport system and may see little need to improve it or advance alternatives to

private motor cars. Thus the grounded position of the non-motorist will generate worldviews that are a more complete picture of the transport modes available and provide greater insights into improvements and alternatives to the dominance of the motor car.

> ***The ideas of the ruling class are in every epoch the ruling ideas (Marx & Engels, 1982: 64)***

The ruling ideas or orthodoxy of correct thought and practice in a car culture are such that, cars reign supreme, cars are desirable and cars should have priority in our transport decisions. The implications of the dominance of ruling ideas, with regard to the dominant mode of transport, is that the wants and needs of those who do not have access to motor vehicles or have no desire to use one, are ignored or given only token consideration. This leads to the position where the non-motorist is transport disadvantaged because resources are disproportionately allocated to car-based responses to transport requirements.

However it is not just the non-motorist that is disadvantaged and the concept of alienation may be applied to all modern travellers. The non-motorist can be seen as having lost their place on the roads and streets and to have become second-class travellers. The pedestrian who once was able to go to and fro with only a few obstacles is now discouraged and displaced by the motor car. Roadways have become rivers of vehicles, with a current so strong that often pedestrians fear to enter and dare not cross in view of the threat to individual safety. For the motorist, although they can travel further and faster, they are limited to and confined by the roads. They cannot stop to smell the flowers and are compelled to move with the flow and direction of traffic, destined to be constantly searching for spaces to park or gaps in the traffic to enter. Confined (mostly individually) in their padded steel cages, motorists are alienated from the community and each other. In many ways motorists may be seen as losing more freedoms than they are gaining. From this perspective all

travellers are increasingly alienated from community by a transport system that simultaneously swamps them, confines them and controls them. The modern traveller, motorists and non-motorists alike, are bounded by the roads, the rules, and the tides of car culture.

Neither motorist nor the car-free commuter can escape the clutches of car culture, but for the car-free traveller forgoing life as we know it, rejecting dependence on mainstream thinking (orthodoxy) and confronting the risks on busy roads leads to non-dependent freedom of movement. The further recognition that the roads are less dangerous than portrayed and that alternatives to car use are for the most part positive, leads to still more freedom of travel. For Hegel (1949) to be fully human it is necessary to become consciously aware of the motivations behind your thoughts and actions.

The car-free participants in this research stand in a position of freedom from the constraints and imperatives of car culture and this is the essence of the difference between being car-free and car-less. There are no material differences between being car-free and car-less; it is simply a matter of conscious awareness. Until the car-less travellers and the motorist are consciously aware of their entrapment they are but slaves. The motorist who uses a car without thought or consideration for alternatives is a slave to the car-based transport system. The car-less, would be traveller, who is waiting to become a motorist is also trapped in the car culture, often forgoing what are better and cheaper alternative modes of transport and the mobility they bring.

It is important to recognise that in a car based culture more than mere begrudged compromise to the alternatives to motor vehicles is necessary for change to occur. Rather it requires active encouragement of more and safer transport modal choices and the development of initiatives such as cycle paths, bus lanes and pedestrian only areas, for the mutual benefit of the individual personally and the transport system as a whole. Hegel's

(1949) dialectical model, promises hope for the oppressed commuter by highlighting that for the problem of oppression and domination to exist, the solution is dialectically inbuilt in the very act of oppression. The massive increases in road user numbers and costs along with increasing congestion, pollution and social exclusions are the inbuilt motivations for the motorist to recognise that living free of cars is desirable and the example of car-free residents demonstrates that it is easily possible and quite practical.

Scope of the research

Definition of car-free

For this project I conducted interviews with nine car-free Hamilton residents, discussing their personal transport histories and seeking their stories about their car-free lifestyles. I defined a car-free resident as someone who willingly chooses not to use a car, in contrast to a car-less person who is unable or not permitted to use a car.

There is room for some debate as to what it is to be car-free. For instance; there is a fine distinction to be made between being car-free and car-light for someone who occasionally uses a partner's vehicle. Also one respondent is in essence negatively included, having no desire what so ever to be a motorist and is better described as a pedestrian rather than being car-free. As this is a car-culture for adults to not own or use cars is seen as unusual, irrational, strange or even 'criminal' (had their licences revoked). For the purposes of this research any Hamilton resident who willingly did not use a car on a daily basis to go about their every day routines was considered non-car-dependent and therefore car-free. Thus this sometimes included individuals living in households with motor vehicles.

Boundaries

As a geographical parameter, limiting the research to residents within the boundaries of Hamilton city had both practical and reflexive elements; my intention was to reach all appointments using either active or public transport options. I managed to reach all but one interview without a vehicle. The one exception however was scheduled to coincide with my weekly motorised commute home to the South Waikato, thereby incorporating the interview within necessary, planned travel.

Limitations

While geographical boundaries are relatively easily discerned, the limits to the substantive matter of this research are more complex. There are many related areas which entice the researcher as a matter of course. For example, there is an ample and interesting literature covering people-friendly urban design, and further material documenting relevant initiatives in other cities and countries. The purpose of this thesis however, is to give voice to the experiences of a group of car-free residents of Hamilton city with a view to gaining insights from their stories. It is important that their dialogues are not swamped by or subsumed into other elements of the broader topic area. This thesis therefore provides a vehicle for their voices to be transported to a wider audience and the ultimate scope of the thesis is driven by the stories they related, the aspects they constructed as integral to their experiences and paths down which they led the researcher.

Thesis design

Given the general paucity of academic literature in this area of research, rather than building discussion from the existing literature, this research takes its lead from the stories of the car-free residents who participated in

the project. The literature is therefore interspersed throughout the chapters and is used to confirm, contextualise or extend the ideas and themes generated by the participants' personal accounts. This was considered the most effective method for elucidating the experiences of living car-free in Hamilton, structuring the thesis around what was heard from the participants and supplementing this with the literature as and when appropriate.

Chapter two outlines the theoretical underpinnings of this research and discusses the researcher's viewpoint, noting any existing bias or preferences. The chapter also presents an account of the methodology employed for this project and summarises the key elements of grounded theory as it applies to this project.

In the third chapter, the public sphere and lived environment in which this research is situated is discussed, providing the background from which the participant's experiences and views are developed. The themes of public and active transport, social and recreational travel are explored, along with the physical dimension – Hamilton city's climate, topography and infrastructure, for example. These themes are presented from the perspective of car-free Hamilton respondents.

Chapter four focuses on the private dimensions of car-free living. That is, it examines elements of car-free living over which the participants have some degree of control or choice (unlike the roading infrastructure discussed in the previous chapter, for example). The advantages of car-free living become evident in this chapter as the respondents discuss matters such as the economics of living car-free and issues around safety – both road safety and personal safety, and the importance and advantages of good time management is canvassed and all these elements come together in regard to school generated traffic. This example is then used to expand and develop discussion of the benefits associated with the participants' choices.

The fifth chapter, obstacles, presents the participants' responses to ten perceived barriers or obstacles to car–free living and in doing so addresses the key questions of this thesis. The chapter continues with discussion of the research findings and concludes with recommendations generated by the participants themselves.

The final chapter brings together the many themes in this research, concluding that from a private and a public perspective the benefits of living car-free far outweigh any disadvantages. For the car-free Hamilton residents who participated in this research, any questions concerning the rationality of living without a car in a society saturated in car culture are quickly refuted by citing their own car-free transport modes as examples of rational commuting rather than the reverse.

Chapter 2
Methodology

Methodology

For this project I have used two qualitative research methods, semi-structured interviews and participant observation. Since it was anticipated that the total population of car-free residents in Hamilton was likely to be small and the number of respondents for this research even smaller, it was clear that the project lent itself well to a qualitative approach. Furthermore, the research intention of investigating the respondents' rationales for their transport decisions also indicated that qualitative methods would produce the most comprehensive data.

Participant observation

Although not specifically mentioned in the research findings my personal experiences of car-free commuting have fostered a favourable impression of the alternatives to cars for daily transport and this informs my perspective. As a non-resident the decision to be car-free whilst researching in Hamilton was a deliberate attempt to experience the cycle and walking paths in the local environment and also to learn the routes and schedules of the local buses, (all of which I travelled at least once). Participant observation whilst commuting in Hamilton added an emic (insider) view to the research, and although I was not completely car-free it fostered an enhanced understanding of the experiences discussed by the participants, especially after cycling to interviews at night. The fact that I needed to 'change buses' to get from my residence to the University, or that I got only 'moderately wet once' in months of wet weather cycling, were difficulties that these personal experiences taught me were far less serious than I had previously imagined.

Grounded theory

Grounded theory (Glaser & Strauss, 1967) has for the last 42 years provided a useful systematic process for qualitative research. Grounded theory is a general methodology for developing theory that is grounded in data which have been systematically gathered and analyzed. Theory evolves during actual research, and it does this through continuous interplay between analysis and data collection. A central feature of this approach is a 'general method of [constant] comparative analysis' (Glaser & Strauss 1967: vii); hence the approach is often referred to as the constant comparative method (Strauss & Corbin 1967: 27).

The basis of grounded theory is that data collected from the participants who are literally 'walking the talk' is considered expert testament to the reality of life experiences of those who are actually living the situation under investigation. Through the process of 'constant comparison' grounded theory methodology 'fits in with lifeworld research, because the emphasis is on individuals as unique living wholes' and the research focus is on 'the world as experienced by the individual' (Hallberg & Lillemor, 2006:141).

The process of constant comparison where data once collected are compared to data already collected produces new foci and research questions which are re-engineered as more and more information is gathered. This process is repeated until a point is reached at which there is considered to be a 'saturation of data' and no new leads or themes are produced or followed. Instead of proving or disproving a preordained theory, this saturation of data allows the development of theory that is 'grounded' in the findings of the research, and thus 'discovers' theory that fits the facts rather than the other way around (Glasser & Strauss, 1999; Tolich & Davidson, 1999; Punch, 1998).

Recruiting participants

Potential interviewees were all Hamilton residents who self identified as car-free. A small group of up to eight interviewees was initially sought through existing personal contacts within three organisations, the Green Party of Aotearoa New Zealand, Cycle Action Waikato and Living Streets Hamilton[1]. Information sheets were provided to these existing contacts in anticipation of re-distribution to potential participants. Snowball sampling within these organisations was expected to provide sufficient participants, but this was not to be the case. I had assumed that car-free people would most likely be found amongst these types of groups. However not one of the members of the three organisations I personally met with, nor any of the helpful contacts I made were 100 percent car-free. Fortunately through word of mouth, it was arranged for me to be interviewed by a local publication, the *Hamilton Press*. The resulting article (Lewis, 2008; appendix 1) outlined my research project and asked for potential participants to contact me. Despite a misspelling of the internet address given in the article, over the following few weeks, approximately 30 phone contacts were made, and from these initial contacts 22 information sheets were sent out (appendix 2).

Information sheets were dispatched to residential addresses with a request that should the respondents wish to proceed, they could arrange an interview at a date and place of their choosing. The information sheets explained that the basic intent of the research was to focus on their transport decisions and their management of their transport needs without cars. It would also seek their responses to a list of ten perceived barriers to car-freedom that are often cited by car users as significant reasons for not being car-free. The information sheet also noted the option to refuse

[1] The Green Party is a pro-environmental political party, Living Streets is a national pedestrian advocacy group and Cycle Action Waikato is a member group of the national Cycle Advocacy Network

to answer a question and/or withdraw from the research and gave assurances in regard to confidentiality. The option of withdrawal was again discussed prior to commencing the interview, as were any remaining questions the participants had about the research project. A consent form was then presented and a signature was obtained.

Ethical considerations

A key ethical concern is the potential for risk to participants though I did not anticipate any significant risks to participants as a result of discussion of personal modes. I undertook however, to keep all records and observations confidential, so that any potential risks to interviewees were minimised. To maintain anonymity I have used pseudonyms for participants and presented the results in themes gathered from all participants rather than as complete personal histories, which might have allowed some individuals to be identified.

Although no risks or problems of identity disclosure arose, nor were topics of a private or sensitive nature discussed in the interviews, there is always the potential for unintended observations in any social situation. When invited into someone's home or office space they are exposing parts of themselves and their lives to you, a stranger. Taking the time to talk with me about their lives is especially generous, given that there is no potential benefit, other than an opportunity to espouse the benefits of their transport choices. As a novice researcher, it was only when I initially used gender labels rather than names in my diary, denoting a couple as HE and SHE (because of what I initially considered to be an overtly patriarchal relationship) that I began to consider and show some caution as to how unintended observations, and in this instance, judgements can permeate the research and how this had come through in my note taking. Unintended observations in this research project were of no consequence;

however in other situations there may be some ethical issues to manage[2]. Awareness of this influence highlights the fact that there is no such thing as a passive or neutral topic, which I initially considered transport to be. The rigors of formulating research ethics applications also adds another dimension to the research process by maintaining the focus of discussion and the research to the agreed topic area, helping develop some structure to the final report, which otherwise could be an endless, shapeless mass of data.

Research population

The total car-free population in Hamilton is small, fostering some initial concern about contacting enough participants. Consequently recruiting people fitting the car-free profile (for example car-free parent and 100 percent car-free households) proved to be difficult. In total eight semi-structured interviews were conducted with Hamilton residents who fitted the profile.

Participants being in short supply at the early stage of the research, one car-light couple was initially interviewed and recorded but ultimately not transcribed or included. During the initial contact stage one partner had self-identified as car-free, but had since taken on the family driver role due to an injury to his partner; they demonstrated a very car-light lifestyle as the interview proceeded even though they were not 100 percent car-free. Although this temporary status arguably would still fit into the description of car-free, sufficient other car-free participants were recruited and consequently the couple's recording was not included. The transcripts from the remaining seven interviews (incorporating nine 100 percent car-free individuals) form the basis of this research. The research should

[2] See Liebrich's research on crime for examples of unintended observation of illegal activity and the ethical dilemma encountered.

therefore be viewed as exploratory rather than definitive, since the group of participants clearly cannot be regarded as representative.

The Participants

The nine participants, five individuals and two couples, ranged in age from their late twenties to mid-seventies and came from various backgrounds. Although long term residents, six of the nine participants were been born outside New Zealand; two participants were from England, and one each from Germany, Holland, Singapore and the USA. There were no Maori or Polynesian participants.

All six of the overseas born respondents recalled regularly using public transport in their youth, which they regarded a possible catalyst for their individual acceptance of alternatives to car use prior to living in New Zealand. For the three New Zealand born participants, only one had regularly used public transport when growing up. However, all nine participants reported high levels of active transport in their youth and little or no parental chauffeuring.

Of the nine Hamilton respondents only two had driven at all recently; one drove occasionally at work and another had driven for a family member. Only one respondent has never driven or held a licence to drive. Most (all except two) reported they would use a car in the unlikely situation it was necessary, probably a rental or a borrowed vehicle.

Two of the respondents had partners with a vehicle which neither had ever driven. The availability of a partner with a vehicle for one of these two respondents allowed weekly shopping trips, but for the other the majority of household shopping was still achieved by cycle or bus.

Interviews

While the interviews were predominantly unstructured, each participant was also asked to respond to a list of potential barriers which was developed from the literature search and during the initial stages of the research process. Because the research is evolving with each interview the order of the interviews will have some influence as to the direction and final outcomes of the research. I was fortunate in that the first interviewee was very articulate and had very clear ideas about the many advantages of his lifelong car-freedom. Starting with this one car-free respondent who was personally known to me prior to the research, the order of the interviews was a random case of appointments usually during the week after initial contact or when it best suited a particular respondent.

The interviews attempted to document the participants' personal transport histories. Audio recordings, along with handwritten notes were taken during each interview, though there were one or two minor problems with the recordings. It was beneficial having a backup voice activated digital recorder (personal dictation type) as on one occasion I was so engrossed in the discussion I did not immediately notice that the tape had finished and on another occasion I mistakenly did not press the record switch and failed to notice for many minutes. Fortunately in both instances I was able to recover almost all I needed from the digital recording despite some sound quality issues.

Between the interviews, the questionnaire sheets guiding the interview were gradually modified and greatly reduced from the initial multipage outline to a brief outline including notes to myself to 'talk less and listen more' and several reminders to 'check that the tape recorder is functioning' (appendix 3). I also found it was better to concentrate on listening without being distracted by note taking during the interview and

then briefly make notes immediately after the interview before I muddled their words with my many thoughts and reflections during my ride home.

Analysis

An injury to my left hand which inhibits my typing meant that the analysis began with a two stage process. Firstly hand written transcriptions were made and these were later slowly typed. All though an additional step in the research process, handwriting seemed to provide a greater comprehension and deeper recollection of the recordings, leading to a clearer understanding of the views and narratives of the participants. This does not readily occur if I concentrate on my poor typing. From these typed transcriptions began the constant rereading and comparison between transcripts from which the analysis was developed.

Line by line reading of the first transcript led to the development of memos, ideas and notes and to new questions for the subsequent interviews. After the second interview, concepts and themes began to 'float' from the lines of transcript. The development of new questions and the following of ideas and themes as they developed led to a saturation of the topic within the eight interviews.

Following transcription the data were coded and thematically analysed in keeping with grounded theory methodology. The outcomes of this thematic approach eventually generated a theory by which to understand/explain car-free living in Hamilton. Developing theory to fit the data rather than finding data to prove or disprove a particular theory is the essence of the analytical prowess of grounded theory and the basis of its productive potential. It can also be argued that each question is a micro-theory and in the asking is proved or disproved and then a new micro-theory asked not unlike traditional theory first research.

With completion of the interview stage of the research and a point of saturation of data regarding the original enquiry was reach, yet the 'constant comparison' of the data collected continued with a thematic rereading of all the transcripts for each of the themes. Again, this is a reflexive process and although the focus is on the theme at hand, with each rereading new ideas are generated and notes and memos are made and carried forward in what can be an endless re-visiting, re-editing process, which only ends when the last word is written. A more experienced researcher would possibly have better instincts as to when to cease this process.

Theme building allowed analysis of the data from individual participants to be cross-referenced across the group, which in turn led to the development of new themes and/or the collapse of others. In total eleven themes were developed from the research, the first nine by recurrence in the transcripts and developed with the intent to give an overview of car-free living in Hamilton. The remaining two themes – barriers to car-free living, and rationality – were both developed from the original research proposal and present the respondents' views of perceived barriers and obstacles to car-free living, along with their rationales for the choices they made in this regard.

Although there is considerable crossover between the themes,[3] they have been developed and presented for clarity under three separate chapter headings, the public sphere, the private perspective, and obstacles.

The public sphere is comprised of data and analysis on Hamilton city, public transport, active transport and social and recreational travel. Collectively these themes set the general background conditions for car-free transport in Hamilton. The private perspective presents themes on economics, time and time management, personal safety, road safety, and

[3] For instance road safety is both a public and private issue, as are economic factors.

school traffic, which all generally focus on the choices and options available to the individual car-free residents. The obstacles chapter explores the theme of rationality and provides an overview of the respondent's opinions regarding ten suggested barriers to car-free living and concludes with a few recommendations.

Thesis writing

The actual writing of a thesis is a much larger task than I had imagined and far more time consuming than I anticipated. Further analysis, ongoing reflection and decisions about what to include and what to omit, all seem to suggest a never ending process. Reflections on the work and new ideas or thoughts come bubbling to the surface at even this very late stage. This is the nature of constant comparison; however word limits and deadlines thankfully do finally enforce an end of business.

Administratively this research is about achieving certain academic standards; academically and personally it is also about presenting voices and views that may commonly be deemed irrational (or at the very least unusual). In giving voice to the car-free participants in this research, I aimed to uncover the rationality of their choices and provide the base for further research. Hopefully I have achieved both of these goals.

Chapter 3
The public sphere

Introduction

In this chapter four themes or inter-related dimensions of this project are presented. These are Hamilton city, public transport, active transport and social/recreational travel. All are presented initially from the perspective of the car-free Hamilton residents who participated in this research and then from a broader perspective. Collectively these four areas describe the conditions and situations that make up the environment which car-free Hamilton residents must negotiate.

Firstly, Hamilton city is depicted as an active transport friendly city with improving attention to the needs of non-motorists. In regard to public transport, the bus services in Hamilton are described and discussed and also found to be improving, although further enhancement of schedules and routes is required. Active transport is investigated as an increasingly popular mode option although it still plays only a minor part in the majority of Hamilton residents' commuting choices. The health, social and environmental benefits of active transport are also raised and discussed, along with the greatest hurdle facing car-free respondents: social and recreational travel.

Overall the transport options for car-free Hamilton residents are described as convenient within Hamilton city, but lacking outside the city limits and at times outside normal bus service hours.

Hamilton city

Situated in the Waikato region, and described as 'one of the richest agricultural and pastoral areas in the world', Hamilton city is mostly flat with a few small hills (Hamilton City Council, 2009a). The city is divided by the Waikato River and a network of gullies that lead to the river. With an area of 98.6 square kilometers Hamilton is 'New Zealand's smallest city in terms of land area' (HCC, 2009b), yet is the seventh largest city in terms of population, estimated to be 166,200 in 2008 (Statistics New Zealand, 2009). The flat topography and compact size, along with a temperate climate - 'mean temperatures of 18° Celsius in January [mid summer] and 9° Celsius in July' [mid winter] (HCC, 2009b) - makes Hamilton conducive to active transport modes. Although a growing number of motorists report traffic congestion problems[4], for all the car-free respondents in this research getting around Hamilton is experienced as trouble free, easy and *convenient*.

> *Hamilton is actually really convenient. Because Hamilton isn't that big, it's probably an hour for me to walk anywhere. (Ang)*
>
> *Hamilton is pretty cruisey. The other day I wanted to go to the pub. I just walked there; 30 minutes walk. It's not a problem. It's a straight line. (Hapi.)*
>
> *Hamilton's small so distance is not a big deal and Hamilton's pretty flat. I don't really see that being hilly is a problem like Auckland or Wellington. (John)*
>
> *I'm always saying to people, 'look at where we live; we are in a perfectly flat city, with buses that go every half hour from every single part of the city.' (Tia)*

The Ministry of Transport recognises that New Zealand has a deeply embedded car culture and reports that most New Zealand cities are car dependent.

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[4]*Hamilton Community Outcomes Progress Report* (2009: 35)*Quality of life surveys have shown that peak-hour traffic congestion is currently one of the biggest concerns about the city for Hamilton residents.* (HCC 2009d)

> *More than half of New Zealanders' travel time is spent driving. [Car]Driver and passenger travel together account for 80% of all time spent travelling. Twelve percent of time is spent walking, 5% on public transport and only 3% by other modes of transport (for example, bicycle, plane or boat). (MOT, 2008: 1)*

On census night 2006, Hamilton households had an average of 1.6 cars each, reflecting the national trend towards the dominance of cars in transport choices. Hamilton city residents use the private motor car for the majority of journeys. The census found 69.6 percent of the working population drove to work in a privately owned car, with most drivers being the sole occupant. A further 15 percent drove company cars or were passengers in cars. Less than 2 percent travelled by bus, although this number will have increased with improved bus services over the last few years (HCC, 2009e).

The Hamilton city Central Business District (CBD) caters well for motor vehicle parking. The City Council provides 999 metered parking spaces, 2818 off-street parking spaces (parking buildings and pay and display facilities), as well as 1853 designated on-street parking spaces (essentially free, although many are time-limited). CBD parking is further supplemented with seven privately owned parking facilities. From a non-motorist's perspective the amount of space dedicated to parking cars encourages car use and was described by one respondent as a paradox. With the City Council predicting growing traffic congestion problems and expressing a desire to increase public transport patronage, *'why then* [asks Peta] *are there so many free car parks?'*

> *They have increased the facilities around town for public transport [but] there are so many free car parks around town and most cars only have one driver. It is counter-productive. (Peta)*

The Waikato River is a major consideration for city planners and travellers alike, with six bridges, it creates distinct travel flow patterns and bottlenecks on roads leading to and from the river crossings. Whilst the river crossings cause compaction of traffic for both motorists and non-motorists, there is also a river path that is a peaceful passageway which

runs beside the river from Pukete in the north of the city through the CBD to the Peacocks Road area in the south of the city. This 16.5 kilometre path on the western bank of the river is essentially a safe highway, free of motorised traffic, for pedestrians and cyclists to share with care into and out of the city. The convenience and peaceful setting of the river path is considered by most car-free respondents as one of Hamilton's major assets.

> *I quite like the walking tracks, [the river path] runs basically from Fitzroy all the way through to Flagstaff, or actually Pukete. It's fantastic … You can go through the middle of the city, on the river banks. You don't realise that 200 metres to your left is the main street of Hamilton. It's lovely and peaceful down there. (John)*

> *Hamilton is such a good place if you want to see the gardens or walk on the river path. It's great. (Geri)*

> *A work colleague used to get the bus to work but now cycles along the river path. If they were to make a few more of those [it] would be very nice. (Peta)*

> *In Hamilton we are quite lucky. Most of it has quite decent bike paths and there is the river path which is absolutely fantastic. It's just really so convenient. (Ang)*

Hamilton is a growing city with extensive residential and commercial expansion in the north and planned expansion in the south. This growth not only covers valuable agricultural land, it will also cause other problems associated with urban sprawl that will have implications for motorists and non-motorists alike. To address these issues Hamilton City Council has initiated *Access Hamilton* which is investigating - among other issues – the city's size and shape, transport congestion and ways to encourage alternatives to the private car. One of the four main foci of the *Access Hamilton* strategy states

> *For some trips, car travel is the best option, but for others, catching a bus, cycling or walking are more appropriate and will hold greater appeal. Access Hamilton will increase the range and standard of transport options. The strategy also promotes healthy choices that contribute to a low pollution environment and improves the personal health of the city's residents. (HCC, 2009e)*

In terms of the desired outcomes for the *Access Hamilton* strategy, the car-free Hamilton residents are already engaging in best practice. By reducing their car-dependence, achieving a lower transport induced environmental impact and living healthy lives they demonstrate that Hamilton city enables low or no car lifestyles.

Public transport

The *Hamilton Community Outcomes Progress Indicators Report*[5] concludes that there is a very high level of satisfaction with the Hamilton city Bus service.

> *Bus patronage per annum has more than doubled since 2000/01. This is likely due to increased levels of service (e.g., improved frequency of buses) as well as increased demand due to rising fuel costs and traffic congestion. ... Satisfaction with the Hamilton city Bus Service has increased since monitoring began in 2004. (Hamilton City Council 2009c: 6)*

Local buses administered by Environment Waikato are the primary means of public transport within Hamilton city. In the year to March 2007 patronage of Hamilton city buses exceeded two million passengers per annum for the first time, a milestone celebrated with free buses on Saturday 12 May, 2007. The accompanying news release titled 'come take a free ride,' quoted Environment Waikato Councillor, Jenni Vernon.

> *The car-based culture is a hard one to break, but we are making a real crack of it here in Hamilton. Putting on more buses, and connecting more locations is providing a real choice for a greater number of Hamiltonians. We are in the business of providing sustainable travel options for the people of the region and these, hugely improved, passenger numbers show that the old adage is almost always true: build it and they will come. We're building a reliable and comprehensive bus network for the city and region, and they are indeed coming. (Environment Waikato, 2007a)*

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[5] Under the Local Government Act 2002 Council is required to report every three years on progress made towards Hamilton's Community Outcomes. Outcomes identified by the community indicate the community's ten year vision for how the city should progress socially, economically, environmentally and culturally (known as the four well-beings) (HCC, 2010)

In February 2009 the passenger numbers had improved by a further 19.9 percent over 2008 passenger numbers, with a total of 2.6 million passengers reported in the 2008/2009 year (EW, 2009). Growth in patronage, encouraged with the increased and expanded services and the building of a new transport centre, was further supported by the introduction of the *Super Gold Card*. This card (issued to those over 65 years of age) entitles holders to a range of benefits, including free off-peak travel on most New Zealand public transport systems. Along with other respondents, Hamilton pensioner Bill reflects the public's appreciation of the improved services and thinks the recent introduction of the *Super Gold Cards* is another incentive to increase his patronage

> *It is a lot easier than it was; I think the new Orbiter [bus service] is a great idea. And now with our Gold Cards it is something we will use more, go out to Chartwell; maybe have a coffee or such. (Bill)*

A quality public transport system will not only cater for the transport disadvantaged (those without access to the dominant transport mode, the private motor car) but also to some motorists as well as non-motorists. It is expected that differing demographic segments within the Hamilton resident population will have varying levels of bus patronage. The potential for regular patronage is higher among the transport disadvantaged, mostly the young and the old. Moderate usage is anticipated from families, people in their 20's and 18-35 year old females and little patronage from 30-60 year old males and higher income earners (EW, 2007b). Motorists generally seldom use public transport, though this may change if their vehicles are not available or if they choose to avail themselves of park and ride options. Greater use of the CBD shuttle, which provides a free bus service which circuits anticlockwise around the Hamilton CBD, would also be a good option for Hamilton motorists, enabling them to travel from one end of the shopping and business district to the other, thus avoiding the problems of moving their parked vehicles.

The three most often cited recent improvements to Hamilton bus services are the two hour ticketing system, which allows no-cost return or onward

trips within two hours of initial purchase, the introduction of Sunday bus services which fills the gap in weekly services and the Orbiter service which is arguably the single best feature of public transport in Hamilton. The Orbiter service provides buses at 15 minute intervals (30 minute intervals on weekends) in both clockwise and anticlockwise directions around a circuit of the majority of suburban Hamilton, a journey taking about eighty-five minutes in total. Among the advantages of this service is that it intersects with the routes taking people from the city centre to the outer suburbs, allowing greater connectivity and convenience. It also stops at some of Hamilton's most frequented destinations, such as Waikato Hospital, the University of Waikato campus, the Wintec Avalon Drive campus and two popular shopping areas, Chartwell in the East and the Base in the North of the city.

Environment Waikato 'recognises that a journey has both a beginning and an end' and attempts to provide as a minimum standard, a bus stop within 400 metres or approximately five minutes easy walking distance from 90 percent of all Hamilton households. Also at the journey's destination, EW positions bus stops close to locations for 'employment, study, recreation or shopping centres' to facilitate a complete service (EW, 2007b). Convenience is a key concern for the participants in this research. Improved conditions, user-friendliness, better route coverage and longer hours of service are recurring features in accounts of their experiences of using Hamilton buses, as John recounts.

> *I could walk to the bus stop, wait 5 minutes and the bus arrives. When you get into the central city, you don't have to worry about parking. You don't have to worry, you just pop out of the bus and two minutes walk and you're at the front door of your office. (John)*

Technological improvements to buses have led to major advantages for some members of the community. Parents with pushchairs, some elderly persons and the disabled are better served by modern buses which kneel to allow ease of access for prams, wheelchairs, and for the infirm who may have previously found buses had discouragingly high steps.

> *There's quite a few of the old biddies who take the bus into town and things. The buses help them [bus lowers] whoosh, all the way to the ground. It's all about being patient and I helped a woman up into the seat the other day, and you get to interact with people you wouldn't normally interact with, I had a good old talk to her. She was 90 this woman, you know just trucking around, with her little carrier bag, and going to her meetings, and going back home again. (Tia)*

Other than private vehicles specially modified for the driver, it is unlikely that standard private cars will meet the needs of the disabled or the infirm passenger. Given that buses are chauffeur driven, greater independence is possible with public transport than can be achieved if private transport is relied on, considering that both a driver as well as a modified vehicle may be needed. Modern buses can therefore offer greater mobility and possibly diminish reliance on others for help with transport needs.

Buses do not always run to schedule and surprisingly this - according to Hapi - did not upset passengers as much as may be expected.

> *People were all being nice, even when they changed the bus route unexpectedly. Nobody seemed to care. It was very NZ. In England they'd be shooting the driver. (Hapi)*

However this is not always the case and some participants provided anecdotes describing problems when using public transport. Some find it difficult being in a confined space in close quarters with random strangers; the body odour of other bus patrons can be a problem and noisy and sometimes rude or disrespectful school children discouraged patronage. Similarly, personal matters such as motion sickness, and agoraphobia were significant problems for some. By its very nature public transport is just that, public. Close and potentially unpleasant contact with others is a distinct possibility. This is true of any public place, such as churches, movie theatres or lecture halls. Generally, among the respondents at least, contact with others is considered enjoyable and desirable in building a sense of community.

> *Yeah I do like public transport. It means I can look around and actually enjoy Hamilton while travelling without having to concentrate on the road, and whatever everyone else is doing.*

Often I will meet people on the bus, or just see the people hopping on and off the bus. It's quite interesting. (Ang)

Regular public transport users may be seen as 'familiar strangers' who recognize each other from regular bus use, but with whom you would not communicate or interact (Milgram, 1977). However passing casual acquaintanceships are sometimes formed and over time may become friendships. 'Bus friends' as mentioned by dedicated public transport user Hapi are a positive bonus of using public transport.

Buses are quite social; people talk to each other, you get 'bus friends' - regulars all take one bus. (Hapi)

Hapi's sentiments were borne out in a television (TV1 One News, 6.50pm 24/3/09) segment which interviewed passengers and a driver who had been regular users of the early morning Titirangi Flyer bus service into Auckland City for upwards of twenty years. They had become such good friends over the years that they have regular social outings and an internet website to facilitate social activities outside their shared commute times. Whilst this may be unusual, it demonstrates the potential social connections public transport can generate.

Public transport in Hamilton has two main disadvantages: very limited night time hours of service and irregular out of town inter-urban services. Although there are recently introduced (limited) Night Buses, the use of taxis in the late evening and at night is the most common motorised alternative to the private car. For the car-free respondents the low levels of service and the isolation of many recreational spots may necessitate the use of rental vehicles for out of town, recreational travel. Car-free resident Geri considers that 'Hamilton is such a good place if you want to see the gardens or walk on the river path, but if you want to see things outside Hamilton town you really need to be organised.'

Overall the car-free Hamilton residents are happy with public transport within Hamilton, and 'of course you always want more or better service' but

> *Hamilton is not a big city. You certainly cannot expect buses every five minutes. That is crazy. Hamilton is small, it is flat and it is easy to get around. (Bill)*

Public transport in the form of rail transport within Hamilton is non-existent although Hamilton straddles the main trunk rail line and is well serviced by freight trains to the ports of Auckland and Tauranga. Unfortunately it is poorly serviced by passenger trains. The daily Auckland to Wellington and return services are currently the only passenger trains that stop in Hamilton, though it is possible that this is soon to be supplemented with a single daily return commuter train to Auckland. There is also some suggestion that interurban trains to nearby towns could be introduced as most local towns at one time did have rail links, although this is highly unlikely given current investment restraints on KiwiRail[6], thus leaving all local and regional public transport solely reliant on buses services.

Active transport

Publications such as The Ministry of Transport's *Getting there on foot, by cycle* (2005) and Hamilton City Council's *Transport: a household guide to improving your health, saving money and getting around Hamilton better* (2005) recognise and promote the benefits of active transport for the community and the individual alike.

Commissioned jointly by Environment Waikato (EW), Hamilton City Council (HCC) and Transit New Zealand (TNZ), the *Hamilton Alternatives to Roading Study (HARTS): Assessment of Walking and Cycling,* (HCC, 2005b) whilst mainly focused on limiting the growth in traffic congestion, also recognised that active transport modes 'are widely known to have

[6] KiwiRail is Government owned and the sole national rail operator.

positive health benefits ... Opportunities exist to increase the health and wellbeing of the general population by providing a network that caters for all possible users' (Opus International Consultants, 2005:11). This local and central governmental support for active transport as an alternative to motorised transport is a positive step in a car dominated culture. However it is not all good news. The positive benefits from preventative health methods are not necessarily given the recognition they deserve, as Boulter points out,

> *.. the ironic situation exists of the economic, health, pollution and environmental benefits of cycling (to the nation as a whole, not just to cyclists) being very widely recognised by politicians, policy makers and the public, and yet being conspicuous by their absence from the project evaluation procedures on which the nation's transport funding decisions are based. (Boulter, 2000:27)*

Overseas, Tom Vanderbilt (2008: 16) jokes 'in America, a pedestrian is someone who has just parked their car.' Not only does he highlight the prominence of the motor car with this pithy observation, he also alludes to the active component in our multi-modal transport choices – the component that requires us to expend physical energy. Whether it is the walk to the bus or from the car park to the office, the school, or the shopping mall there is always some measure of an active component in our journeys. Others are not willing to give up their own car use completely, but recognise that

> *... the biggest contemporary scourge that allows us all to avoid significant daily exercise is the use of a car for our transport needs including the short trip to the dairy for milk or the Sunday paper. (Sellman, 2008:45)*

Unnecessarily driving for short distances is a recurring event reported by Hamilton car-free residents, and English-born respondent, Hapi comically describes New Zealanders as *'bums for cars'.*

> *People get in their bloody cars and drive to the dairy [even if] it was at the bottom of the street. I used to say if they had outside toilets they would drive to them... If it was at the bottom of the garden like it used to be they would be driving to the dunny. It's nothing to do with distance, it was a 3 minute walk and they'd get in the car. (Hapi)*

This ‘foolishness’ says Hapi also applies to parents driving children to school when they could walk or take a bus. ‘It is a complete irony to me’ concurs Bill ‘…some people drive to the gym to do a workout. It may be walking distance but they drive. It is crazy.’

Sellman suggests a solution to the problems of insufficient exercise, unnecessary driving and the accompanying

> *… common frustration of finding a suitable park, particularly with the obsession with parking as close as possible to the destination, is to incorporate a greater proportion of activity in the daily commute….. It might seem odd to deliberately leave your magnificent machine a 15-minute walk away from where you’re trying to get to. But, on the other hand, wouldn’t that be smart thing to do? You’d get close to work, have no trouble parking and, in the process, get a half-hour brisk walk. (Sellman, 2008:45)*

Car-free participants contributing to this research have embraced this idea, extending their active transport to the point where private cars are no longer required and arguing that ‘the benefits far outweigh the frustrations’ (Tia). According to their lived experiences, an active car-free lifestyle combined with the concept of utilising travel time as exercise time, brings health benefits, as well as savings in time, gym membership fees, and transport related costs.

> *One of the secrets of getting sufficient exercise while living a busy life is to fit exercise into your daily routine rather than viewing it as yet another thing that must be done. (Sellman, 2008:46)*

Walking or cycling to work for Ang not only saves money in vehicle running costs, but is also an opportunity in her busy day to exercise. ‘With chores and things, by the time you are actually organised, it’s dark and not really convenient to exercise so it [walking or cycling to work] is a really good time to get your exercise in’ *(*Ang) .

John reiterates Sellman’s view, suggesting that getting off the bus a few stops early to enjoy the walk home, combines public transport with active transport to increase his exercise options. Seventy-six year old Bill still

cycles daily and attributes his good health to a life time of cycle commuting.

> *There are health benefits; I played tennis with my 18 year old grandson and beat the living daylights out of him. I think that riding is darn good exercise and that more people should ride bikes. ... I have got older friends well into their seventies who go tramping in the bush, so really it is a matter of fitness and attitude. Many for their age would shame some of the younger people in their forties, but it is only because they keep at it. (Bill)*

When discussing distance as an obstacle to car-free transport, car-free resident Peta thought that a person's level of fitness, 'fitness for distance' is a significant determining factor in choosing active transport.

> *… it depends on what is too far away for them. For some [people] it would be too far away but it is a matter of getting used to cycling. For example, fitness, the fitter you are the fewer problems you will have with your distance. (Peta)*

Peta's partner Seta, also a life-long car-free resident, concurs stating that 'if you exercise every day it is nothing.'

The existing car based transport systems routinely exclude an important element of the mobile public. A significant proportion of the population is '*transport disadvantaged*'; they are either too young, or too old to hold a driver's licence or simply they are untrained and/or have no desire to hold a driver's licence. Ker and Tranter (2003) illustrate the extent of the problem in their discussion on the question of 'Automobility for whom?'

> *Using data from Western Australia, the transport disadvantaged are disproportionately the young, (100% under 17)], the aged (43% of those over 60 do not have a driver's licence) and women (25% of women over 17, and 60% of those aged 60 and over do not have a licence to drive). (Ker and Tranter, 2003:107)*

These groups are also routinely excluded from active transport. For example, it is unlikely that an aged person who is no longer able to drive would be able to participate in high levels of active transport. Nor could the very young walk or cycle great distances. Bearing this in mind, improvements in active transport facilities, such as cycle lanes and walking paths, need to consider that it is not just fit adults who will be regular users

and ensure shelter and rest points are positioned reasonably close together. Importantly, the young and the old who have few other options for independent travel need to be catered for, possibly combining public transport with active transport for their daily transport needs.

The New Zealand Institute for Research on Ageing report *Coping without a car* (2004) advises that

> *Losing access to private transport affects social networks and travel patterns. ... Where people are limited by disability or ill-health, they risk becoming isolated and housebound. Outlook on life and the extent to which people feel dependent on others are also important, as autonomy is crucial to quality of life in old age. (Davey 2004:1)*

If car-free respondent Frank is an example of the benefits of active transport, it is clear that the more active a person is over their lifetime, the longer they can maintain independent travel and in so doing extend their social activities past a point when many aged persons are withdrawing to a life confined to their immediate environment or dependant on friends and relatives for transport. Using active transport for all your needs is not always easy but 'the benefits far outweigh the frustrations' (Tia).

Social and Recreational Travel

Not owning a private vehicle and preferring to avoid using them, does not necessarily equate to a total exclusion of motor vehicle use. Taxis, shuttles and rental vehicles all have a part to play in the transport options available to car-free residents. Hamilton is well serviced by taxis, shuttle services and rental vehicles. There are five different taxi companies, six passenger shuttle services and nineteen rental car companies listed for Hamilton in the *Yellow Pages*. These alternatives to private ownership of motor vehicles in theory give car-free residents multiple transport choices, although in practice they are seldom mentioned or used. The respondents expressed a general reluctance about using taxis, although most reported having done so.

Yeah I used taxis a couple of times, but get organised and just jump on the bus. (Ang)

Only in an emergency. But it is something I should consider, getting on the bus with lots of bags is difficult, so the taxi is worth some thought. (Bill)

You know if it's late at night maybe I'd get a taxi, but in general, I'd walk…. But, if have a couple of beers you can get a taxi afterwards or something like that. (John)

This reluctance appeared to be related to the higher cost of using taxis as opposed to buses and respondents indicated that good organisation was instrumental in avoiding the extra expense. Choosing to organise a ride home after a night on the town to avoid intoxicated driving and arranging a ride by shuttle to the airport to avoid parking fees, are seen as economically rational choices by many motorists. By contrast forgoing cars altogether and using taxis, shuttles and buses on a regular basis tends to be seen as impractical. Rightly or wrongly, it is also regarded as being expensive and inconvenient. For the car-free traveller the 'motto' of getting organised and planning ahead when it comes to travel choices may take a little forethought but is, according to Hapi, easy enough.

I could have got a taxi, but I couldn't be fussed. Walking is really easy; all you do is keep moving. [It] depends if you want to do something you have got to plan ahead. Depends on how far away ... if I want to go to a conference or overseas I just get the shuttle to the airport or downtown to the bus depot by bus. Easy enough. (Hapi)

Rental and borrowed vehicles are further suggested options when organising an outing or to do particular tasks which require motorised transport. Cal also finds it relatively easy - although time consuming - to organise alternatives.

It just takes a bit more time if I don't have a car; you have to look at rental cars. It takes time to find best deals I guess or whatever. Or if you know some friends who may be interested in joining you it takes time to call up and organise rides and shares in a rental etc. (Cal)

When it became necessary for John to do some home garden maintenance which involved collecting a mower from out of town and

taking rubbish to the dump he combined the two tasks and hired a utility vehicle for the day.

> *I cleared out all the rubbish from behind the garage. Loose trees and grass clippings and stuff like that. I just hired a ute. Also had to pick up a mower that I had to go and get in Huntly. So if I was going to have to hire a ute at some stage, I combined the two [tasks] and away you go. (John)*

John's choice to hire a utility vehicle demonstrates the benefits of hiring or borrowing an appropriate vehicle, given that many car owners would still need a trailer or a larger vehicle to achieve these same tasks. This further reinforces the idea that good organisation has multiple benefits, some possibly overlooked by the regular motorist. Sharing rides with family and groups with a common purpose and destination is easily organised for the most part. When car-free Tia visits her mother, two or three times a week, she often gets picked up by her mum and equally often will get a ride home with her sister. 'I wanted to get home, my sister was coming this way anyway' (Tia). The members of sports teams also willingly share rides.

> *I play in a local soccer team and I can get there without a car no problem. Most of it is in Hamilton, quite convenient. If we were playing a game on the odd occasion in another town, I would jump in the car with one of the other girls. (Ang)*

Sharing rides also takes organising, although mostly just a phone call.

> *At some of these societies I go to, people say "if it is raining [Bill], ring me up and I will give you a lift". Maybe twice a year I would accept a ride because I would arrive there soaking wet otherwise. Maybe three times a year we go to church together in the car, but because she likes to hang around afterwards and socialize I would have to wait, so I prefer to ride. (Bill)*

Thus, while Bill is reluctant to be reliant on others for transport he will accept it when necessary or appropriate. Putting the reluctance to depend on others aside, two people sharing a car is perhaps the single best way to reduce vehicles' carbon footprint and fuel consumption. A single occupant car can double its per person fuel economy and halve its carbon footprint by taking one passenger and sharing costs. Given the high

incidence of single occupant vehicles, this effectively takes another vehicle of the road.

Many clubs offer their members free and/or subsidized transport. This may take the form of a van that collects and delivers drinkers safely home from social clubs and organised outings to events in and out of town. An example of these services is the Hamilton Tramping Club where car-free Hamilton residents Peta and Seta are both new members. 'We have become members of the tramping club and we use their transport for days that they organise to walk in the forest.' The imperative to use rental or borrowed vehicles for recreational travel is mostly due to low levels of public transport service, which is the result of low demand for such services and the relative isolation of many recreational spots. In line with improved local buses, the inter–urban commuter services coming from all four directions Huntly (North) Cambridge (South), Te Awamutu (West) and Morrinsville (East) have all improved. However, given a relatively small regional population, together with dispersed smaller towns and geographical and tourist attractions, a single daily service – if any – is the norm for most of the Waikato region.

When car-free respondent Geri wanted to do voluntary conservation work at Maungatautari, (a nature reserve about 20 kilometres outside Hamilton), her car-freedom inhibited her contributions. Getting around outside of Hamilton city, especially for newcomers to the district like Geri, was one of the most difficult obstacles to living car-free.

> *I don't have a car. So the only thing I can do is travel when other people have a car who drive from Hamilton, I'm dependent on Hamilton people driving me there when they want to go there. (Geri)*

Seta, another newcomer to Hamilton, agrees.

> *We can do all the things we want or need to do without a car in Hamilton, but it is when we want recreational travel we have problems. (Seta)*

The difficulties of getting around outside the city are not insurmountable however, and as a last resort Hapi proposes 'you can always hitch-hike if you are stuck'. Peta suggests more active travel.

> *... getting out of the city is a bit of a problem. But we have always managed getting around. Before we settled down we cycled through NZ for 8 months, so we have seen large parts of it. And at Christmas holidays we will go for a big ride again. (Peta)*

Bill suggests sharing a ride with friends.

> *We always go to the same place for our holidays. We have friends we go up to the Coromandel with each year. So we would jump in their car and away we go. (Bill)*

And Tia's holiday travel solution is this *'*Christmas break is to fly to Motueka to be with family'.

The need to carry recreational equipment also poses many problems and only a few solutions. Borrowing or hiring a vehicle for the annual camping trip is quite reasonable but regular activities may require a more permanent solution. A trailer boat or suchlike would be pointless without a vehicle to tow it. The use of a vehicle with roof racks to carry kayaks from drop off and pick up points is generally best accomplished with a dedicated motor vehicle which comfortably transports kayaks and crew. It is difficult to carry a full set of golf clubs on the bus, though the availability of appropriate storage may allow sporting equipment to be kept at the necessary place in some instances, ready for use, thus avoiding the transportation problems. However if you are going to play somewhere else particularly out of town, then you are likely to need a car.

Discussion

Due to the city's compact size and gentle topography Hamilton is well suited to active transport modes and although many residents do make some use of the walking and cycling facilities, motorised transport in the form of the private automobile, reigns supreme and limited consideration is

given to alternatives. Calls for change are coming from various sources; Hamilton City Council (HCC) is questioning the size and direction of city growth[7], motorists are critiquing road congestion and residents are questioning the environmental and social impacts of more cars, more roads, more parking and more pollution[8]. The HCC is proposing higher population densities and greater levels of public transport service, along with more resources being put into active transport infrastructure in order to address many of the issues raised by residents.

There is some considerable resistance to HCC plans, with *Variation 21* of the district plan getting a lot of criticism, most notably from commercial developers in North Hamilton where further substantial development was planned. *Variation 21* seeks to encourage commercial development in the CBD and places greater restrictions on developments outside the CBD. The reasoning behind *Variation 21* is to encourage city density and growth in the city centre. It is envisaged that from this improved, revitalised city centre, the number and scope of public services will be expanded and improved. This is particularly important in regard to public transport where higher density populations can generate greater patronage and ultimately, more services.

Already city growth to the north has expanded to such a distance that active transport into the CBD or for instance, the Hamilton Gardens in the south would be out of reasonable active transport range for most of the new northern suburbs residents. The rapid growth in the northern suburbs has also lead to changes in the public transport service which now goes further into Rototuna adding 15 minutes to the Orbiter bus route which now takes over the hour to make one complete circuit. On both clockwise and anticlockwise routes most stops on the Orbiter service could

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[7] Hamilton Urban Growth Strategy is based on the concept of '*mend before you extend*' (HCC 2009).
[8] Quality of living survey (HCC 2009).

previously have been reached in half an hour or less[9]. This is no longer the case. If this rapid growth is repeated in the southern Peacocks Road development, the city will become elongated, making public transport routes longer and less inviting, thereby discouraging active transport modes for general commuting. One of the proposed amendments to NZS 4404:2004 Land Development and Subdivision Engineering[10] is a greater focus on the need to incorporate better public transport services and features that enable quality active transport choices. This is also a clear focus of HCC, but developers continue to resist the changes.

It is unlikely for there to ever be 'enough' public transport as the city demographics change along with the accompanying changes to city zoning and land use there is regular need for bus route changes. From these changes to the bus route network there will often be winners and losers; not every residence or business can have public transport at their doors. However public transport in Hamilton does offers bus stops within 400 metres of most residential properties and half hourly services for daytime hours with more limited early evening and weekend services[11]. This means that for Hamilton city residents, most regular transport needs can be met by using public transport within limited hours.

Hours of service for the buses certainly needs improving. For residents who start their day early, if they need to drive in the morning they will drive home in the afternoon. It is less likely for someone to use the bus if there is no return trip available later. Thus by increasing hours of service, patronage will increase on the new services and also on the existing services. There is potential to get two for one paying fares for each new user of the extended services, assuming an outward journey during

[9] Historically recognised as comfortable commute time (Vanderbilt 2008).
[10] http://shop.standards.co.nz/scope/NZS4404-2004.scope.scope.pdf
[11] With the exception of the Orbiter Service which runs in both directions on weekdays every 15 minutes from 6.15am to 6pm and every 35 minutes from 6pm to 10pm. Services run every 35 minutes from 6.15am to 8pm Saturdays, Sundays and public holidays.

current hours with a return on the suggested/desired later services. The limits on hours of service suggest that bus operator Environment Waikato (EW) is taking a short-sighted approach, undermining what is essentially a quality transport service.

There are economic reasons for lower than optimal levels of public transport service and with bus services already heavily subsidised it is difficult to justify more funding for longer hours of service. However in addition to the recognised individual and social benefits of public transport there are also possible economic benefits associated with public transport. If the high level of subsidies applied to other forms of road transport which is variously estimated to be a subsidy of up to 60 percent of cost (Buckle, 2009)[12] are included in the evaluation of the subsidies applied to public transport and new services generate a larger total patronage then improvements to the bus service starts to appear as a more fiscally prudent social good than initially assessed.

When discussing active transport it is suggested that training at the gym or other exercise regimes could be curtailed simply by getting out of the car and using active transport as a substitute. However the view that substituting the stationary cycle or the walking machine for active transport, ignores the other benefits of gym membership, such as working particular muscle groups with resistance machines and weight training, along with other facilities such as saunas, showers, plunge pools and the social interactions and camaraderie of fitness classes. The often stated problem of needing to change attire from active transport mode to business mode may be solved by gym membership close to one's place of work or study. Similarly the need for a change of clothes after a sweaty active commute, along with having a good place to store towels and toiletries or to stash running shoes, or cycle helmets and equipment could

[12] http://www.voxy.co.nz/business/new-report-confirms-huge-pricing-advantage-road-freight-industry/5/27140

be addressed with lockers at a nearby gym or club or even on the work site.

The Ministry of Health recommends New Zealanders should engage in at least 30 minutes of physical activity at a moderate intensity on most, if not all, days of the week (MOH, 2010). A twenty to thirty minute daily walk or cycle to and from work, school or business could provide most of the recommended physical activity required for healthy living. From my personal experiences and those of the car-free Hamilton respondents, getting around Hamilton by foot or cycle is easy. Most destinations can be reached relatively quickly, within approximately half an hour, and without arriving dishevelled or exhausted. In most instances a small bag or backpack will carry all that is immediately necessary for the day.

Making active transport choices is akin to healthy eating choices – anecdotally, most would agree it is a good thing, but not many sustain their good intentions. Convincing Hamilton residents and helping them to implement and sustain changes in their commuting habits is a project that may encounter significant resistance. The pervasiveness of the car and the car and associated industries in our day to day lives is irrefutable, reflecting the power of vested interests that want to sell more; more vehicles, more roads, more fuels, more motoring products and more paraphernalia.

If the hegemonic position of the automobile is to be challenged, it will take tenacity, a united approach and a concerted effort from the many organisations that recognise the benefits of active transport. A recent paper from the University of Otago, School of Medicine raised suggestions about how the health sector could contribute to advocacy efforts, including encouraging political commitment, engaging the media, communicating the potential health benefits of active transport to the general public and being role models in terms of personal travel mode choice and having workplaces that support participation in active transport (Richards et al,

2009). The benefits of raising the awareness of the secondary, non-transport benefits of active commuting is important in promoting positive health outcomes for the community and also supports the need to develop and engage with policies that make space for alternatives to motor vehicles. A cycle track, for example, not only removes vehicles from the roads, it also has positive health benefits which may then be reflected in lower health costs across the community. Working together, transport policy makers from HCC, EW, and New Zealand Transport Authority (NZTA), along with health promoters from Waikato District Health Board could combine resources and media connections to present a more comprehensive picture of the benefits of active transport to Hamilton city, its residents, and their health and wellbeing.

Motorists mostly "require" cars to get to work or to shop, though it is these regular, daily or weekly destinations and tasks that are most easily achieved by means other than the car. The regularity of destination and time of travel allows for easy planning and for most Hamilton residents their regular travel needs mesh very well with public transport. Social and recreational travel is, however, often less predictable and the journey's destination and timing are less likely to be catered for by public transport. Taxis do make up some of this shortfall within city limits, but the difficulties of transporting bulky equipment or goods at short notice remains problematic, as is most out-of-town travel due to sporadic nature of inter-urban bus services.

Although the importance of these social objectives (employment and shopping) is recognised here, this research indicates that cars are not necessarily the essential tool 'required' for daily income and consumption. Rather, they are a social and recreational 'want', more akin to a toy than the tool they are portrayed to be. From this perspective, a boat for example, normally regarded as an expensive luxury, is no more extravagant than the car used to tow it. However social and recreational activities are important and monetary values and other practicalities often

assume secondary importance to family, friends and fun. Bearing this in mind, it is most unlikely that motorists would willingly give up cars entirely, regardless of the many other benefits.

The car-free residents in this research set an example that there is life in Hamilton city without the car and that transport needs can be met in other ways. None-the-less family groups and associates travelling together, sharing rides to visit friends or to go surfing still requires the use of a vehicle and the shortage of alternatives may warrant having one family vehicle[13] to be shared to meet social and recreational needs of the household. Improvements to casual car rental (such as hourly rates and multiple pick-up and delivery points) and the introduction to Hamilton of car share clubs[14] (such as Cityhop[15]) could meet some of this need and further reduce the demand for individual car ownership.

[13] Currently NZ households have average of 1.6 vehicles
[14] These can be formal businesses or informal groups that share costs for mutual benefit.
[15] *Cityhop* is a self- service car share company with cars for rent by the hour, day or the week available to members in Auckland, Wellington, Christchurch and New Plymouth. (www.cityhop.co.nz)

Chapter 4

The private perspective

Introduction

Identified from interviews with the car-free Hamilton residents, five themes - economics, time and time management, personal safety, road safety and school traffic - are introduced and discussed in this chapter. Collectively these five themes present the private worlds of the participants and provide insights into how individual transport decisions impact on both the community and the individual.

There is considerable crossover between themes raised in this chapter and those in the preceding public sphere chapter and similar overlaps will again occur in the following chapter, obstacles. Road safety, for example could be discussed from both a public and private perspective as could the economics theme. In contrast to the previous chapter which focused on external factors, which are largely beyond individual influence, the focus of this chapter is on personal decisions that the car-free respondents make and how they managed the issues associated with these five themes.

The first of the five themes -economics- confirms that cars are expensive, which is to be expected. When the externalities of car ownership are included however, expensive appears to be an understatement. In the time and time management theme, the perceived time savings and conveniences of the immediacy of the private car are challenged. Ker and Tranter's (2003) concept of 'social speed' is introduced in a discussion of wasting time and waiting time, concluding that more efficient use of time can often be achieved with public and active transport modes in comparison to individual car use. Safety issues are the focus of the next two themes, with the opinion of car-free residents being that the roads and public places are safer than many motorists consider, and that safety

concerns are over estimated and an unnecessary hindrance to encouraging more public and active transport. School traffic is seen by all participants as an example of the excesses of car usage. Driving children to school is considered unnecessary, unhealthy and often a danger to other children who walk or cycle to school.

Economics

> *The costs of running a car are a lot higher than people realise. A typical car driver on an average salary has to work nearly two days per week to earn the money to buy a car, garage it and pay for petrol, insurance, repairs and parking. By contrast weekly expenditure on public transport can be earned in about an hour. (Sloman, 2006:164)*

The Automobile Association (AA) estimates the financial expense incurred by owning and running a three to four year old medium size car is $180 per week or approximately $10,000 per annum (AA, 2010). Whilst this figure does seem high and would possibly be lower for older vehicles due to the lower depreciation rate, higher maintenance costs for older vehicles may somewhat balance this. There are also the peripheral costs associated with parking, such as car park fees and the value of garaging buildings (which effectively adds tens of thousands onto the cost of a home)[16]. The land value of road access and off street parking also needs to be considered along with the cost of the concrete driveways or the cobble stones, which also requires substantial financial investment, all adding to the total costs of car ownership.

All the participants in this research commented on the economic benefits of being car-free. Other than the original fixed cost of the vehicle purchase, in the opinion of the car-free respondents, motorists often consider only some of the variable costs such as fuel and oil. When they consider the cost of vehicle ownership, they readily identify running costs,

[16] A free standing metal clad garage on concrete floor could cost in excess of $10,000 and to have an attached medium to large garage in the style of the house can cost 2 or 3 times this amount.

but often overlook costs such as maintenance, insurance, registration, garaging and depreciation. The general perception of the participants was that car users are mistaken in the belief that car use is an economical means of transport.

> *You hear people talking 'well all buses are $1.80 - $3.60 that's a lot'. And you think oh well I get my petrol, then somebody says 'wait a minute, you've got your depreciation, you've got your WOF, you've got your insurance, you've got your car parking, plus all prices are going up'. People actually have the mistaken belief that it costs more to take a bus than to drive, which is absolute bollocks. Plus you've got your capital investment of 30, 40 perhaps $50,000 worth of car to pay for and hire purchase costs for most people. Their economics is wrong because they haven't thought it through. They just look at a very narrow thing, a little bit of petrol but that is not the only cost. You've got depreciation and all the other costs. They're not aware of it. (Hapi)*

Peta agrees that the view of car ownership as economical is usually wrong, stating that cars provide 'convenience maybe, but the insurance cost, the petrol costs and repair costs of cars are definitely a false idea for motorists.'

After getting a new job in Hamilton the amount of use John was getting from his car did 'not justify the cost for me in my current circumstance'. John who previously commuted by car to Auckland each day, found it was not just the expense of the running costs of vehicle ownership but also the fixed cost which, even when not using the vehicle, soon mounted up.

> *At the end of that second year I said, 'this is a waste of time.' It was sitting in the driveway basically rusting, and it was still costing me for a warrant and costing me registration. The decision to not have a vehicle is a conscious one. I can't justify the costs of having one. If I do have one, for six days a week it's going to sit and rust, and on the seventh it might go 30 kilometres. I could afford one if I wanted one, but I would be better off sitting on the deck lighting $10 notes every week. It would be cheaper, and that's just purely for registration and the warrants. (John)*

Cal another former vehicle owner, who recently moved to Hamilton noted,

> *... quite a big difference in economic benefit and time too. The car I used to have required some time for maintenance not just petrol. There certainly is time and cost involved in maintaining a bike, but with petrol and time there is certainly a saving to be made from not having to spend money on petrol and registration fees etc. (Cal)*

Tia considers she has been 'managing perfectly well' despite no longer owning a car and is saving up to sixty dollars per week in the process.

> *I don't have to worry about parking; don't have to worry about warrants or petrol or rego and insurance. When I did have a car, petrol just even then, 3 years ago, petrol just used to do my head in. It was the last 20 dollars I had, and it had to go in this stupid car. Now it would be the last sixty probably. (Tia)*

The participants' experiences have confirmed for them that active and public transport modes are a far more economical form of transport than private cars. Tia makes a good argument that the costs of using buses can be offset by saving on car parking fees alone.

> *I try to rehabilitate everybody I come into contact with. My mother works at the hospital; I explained to her the Orbiter bus goes right through the hospital, and it would cost her only $3.60 per day. I think she's paying $5-$6 for staff parking fees. (Tia)*

Things are starting to change according to Hapi. With the free buses supplied during the recent Hamilton V8 street races he noted people using buses who normally would not and it was 'opening their eyes'.

> *I hear this lady at the bus stop shelter, 'well I'm not a greenie but I've started leaving my car at home, because it's cheaper to take the bus.' So people are making comparisons. When petrol was cheap they wouldn't think about anything else rather than using a car. (Hapi)*

In Tia's opinion given the availability of the many alternatives 'people are just attached' to their cars and blames this on consumer society. The constant media supply of new and improved images of the 'pleasures and benefits' of this year's new model perpetuates the ill-considered mass consumption of cars.

> *..... like all the ads on television tell us, that this car is an extension of your personality. Oh my God you have to have this car, oh it's a great little car, it's only $20,000. Yeah I think we are all suckers for that status symbol and that materialism. (Tia)*

It is often suggested that the second most expensive purchase in adult life is a motor car. This indicates the primacy of car ownership in our thinking, and the success of advertising by motor companies. It also acknowledges the high percentage of life time expenditure dedicated to cars.

Time management

> *The typical American male devotes more than 1,600 hours a year to his car. He sits in it while it goes and while it stands idling. He parks it and searches for it. He earns the money to meet the monthly instalments. He works to pay for petrol, tolls, insurance, taxes and tickets. He spends four of his sixteen waking hours on the road or gathering resources for it. And this figure does not take into account the time consumed by other activities dictated by transport: time spent in hospitals, traffic courts and garages; time spent watching automobile commercials or attending consumer education meetings to improve the quality of the next buy. The American puts in 1,600 hours to get 7,500 miles [12,000km]: less than five miles per hour [8kph]. In countries deprived of a transportation industry, people manage to do the same walking wherever they want to go, and they allocate only three to eight percent of their society's time budget to traffic instead of 28 per cent. (Illich, 1974:30-31)*

Illich's 1974 claim that 28 percent of our active hours is being devoted to transport appears high and his estimation of five miles per hour overall speed very low. By way of an improvised comparison, Statistics New Zealand's three-yearly household economic survey found New Zealand households on average in 2007 spent 14 percent of their income on transport (2007). By either account we spend a lot of time, money and energy consuming cars. Although this is discussing different variables, active hours and average expenditure, it is clear that motor vehicle travel times cannot be viewed in isolation from the services and physical infrastructure needed to support them. A comparison to Illich's 1974 study made by Sloman, adjusting for cheaper vehicles and higher wages, found

> *The typical British car driver in 2005 devoted three and a half of his sixteen waking hours to his car….. his average speed is less than eight miles per hour … (2006:10)*

Somewhat paradoxically, there is not much that is automatic about the misnamed automobile. Not only is there a great deal of time and cost involved in owning a vehicle, there are also all the processes involved in obtaining a licence to drive in the first place. And when a driver does have a vehicle and permission to drive they can only do so because of the vast infrastructural investment in roads by central and local government, along with the global businesses of refining, transporting and retailing the petrol, diesel and motor oils needed to power the vehicles. Further, there is a

whole industry dedicated to car maintenance and repair, not to mention law enforcement and the rescue services which attempt to make mobility safe and possible. All of these activities consume valuable resources, including time. Australian transport researchers Ker and Tranter refer to the car-induced consumption of time, as a component of 'social speed'.

> *'Social speed' is a new definition of car speed that explicitly takes into account the amount of time we need to work in order to earn the money to pay for a car. …. Social speed is lower than measured speed because it takes a wider view of the time associated with driving. (Ker & Tranter, 2003:111)*

Factoring in social speed would mean that if 10 hours per week were spent servicing car costs and only 10 hours per week driving was undertaken, the driver is then in theory travelling at only half of the indicated speed, taking twice as long dedicating 20 hours to travel. This is not to say that the concept of the private motor vehicle as a time saver is a complete myth, but rather, the point being made here is concerned with diminishing returns. There is often more time and energy put into producing and propelling our favourite transport tool than is gained by using these same tools, a paradox that becomes more evident when compared to other modes of transport such as public transport, cycling or walking. A time saving machine (the car) is in fact adding to time poverty due to the induced demand for transport it creates which in itself consumes time adding to time costs incurred in providing propelling and maintaining the time saving machine.

Not only are the full costs and time requirements of car use and ownership under estimated by motorists, their travel time for each journey is not necessarily faster. Werner Borg found that drivers

> *underestimated the actual cost of travelling by car … [and that] … on average, people overestimated the public transport journey time by 70 percent … [and] … underestimated the journey time by car by 26 percent … (cited by Sloman, 2006)*

Balish (2006), quotes Katie Sobush, a 27 year old planning and policy analyst from Atlanta Georgia

> *It takes me about the same time to commute by bike as it does my co-workers who drive in from the same area, and I'm getting*

physical activity. When there is heavy traffic I beat everyone… (Balish, 2006:122)

Similar comments are made by Hamilton car-free residents who were interviewed for this project. Tia, a third year University of Waikato student and full time mother, has little time to spare and so chooses to ride the 3 kilometres to campus each day because it is quicker than walking and more convenient than a bus or a car.

When I bike up to uni, I'm biking past this huge line of cars, and just cracking up, thinking, I'm gunna get there before you do and I'm totally relaxed … Every morning at uni I point and laugh, look at you, you got here at ten past nine and you are not going to find a park. (Tia)

The convenience of a private car and the suggested time savings this may or may not bring will have different value or worth to different people. One person, for example, may more readily take to walking or cycling to work in the morning where another may need to start their day more sedately. Yet another who works very long hours may value a few extra minutes at home in the morning and then race off in their vehicle.

While most participants interviewed did not necessarily disagree with this view, in instances where a car would be quicker, the respondents felt that the extra time was worth it – they saw it as a smaller price to pay than the costs of car use. Retired car-free Hamilton resident Bill was of the opinion that good use of time was most important.

You can make time. If you are going to work you get up 15 minutes earlier, it is easy enough to do you have a choice 15 minutes in bed or 15 minutes on the road makes sense to me. ... If you are going to the supermarket for instance you need to suit your trip to the times of the buses rather than hope the time the buses run fits your schedule. Hamilton is not a big city; you certainly cannot expect buses every five minutes. That is crazy. (Bill)

Bill and other respondents did not accept the argument that people were too busy to give up their cars. He responds, 'well make yourself unbusy' and suggests this can be achieved by multitasking and better time management.

This idea of time management is constantly referred to in the car-free residents' responses. 'I'm busy, I can be busy, you just need to organise your busyness' states Hapi who can read and do sudoku puzzles whilst walking and also does paperwork when riding the buses. Others use their public transport waiting time for shopping and active transport time for exercise.

> *The thing without having a car is it taught me to be patient. You're waiting for the bus, the bus will eventually come. You feel like your day is much more relaxed. You're not leaping in and out of your car. Ok you're waiting for the bus sometimes. ... I mean good grief why are we all rushing around for anyway. (Tia)*

> *yeah. I think its all about planning ... what else do I need while I'm out? … do I really need what I'm going to get? (John)*

Time management is essential for everyone, perhaps more so for those who live car-free, but this does not necessarily rule out spontaneity. When asked to respond to the statement 'people who are car-free are boring, mediocre stay-at-homes', the responses ranged from 'I don't do spontaneous' (Hapi) to a resounding 'definitely not true' (Peta).

> *Generally I am spontaneous; most of the things I do are actually in Hamilton. ... So it's just as quick to jump on my bike, because cross town is only ½ an hour, so if I had to organise myself, get myself in the car, go find a car park somewhere, it's just as easy to jump on the bike. (Ang)*

The ability to travel to most places in Hamilton within half an hour fits well with research that suggests the average desired commute time is 35 minutes or less each way. World Bank economist Yacov Zahavi's theory (cited in Vanderbilt, 2008) of a 'travel-time budget' suggests that as an international average, people are prepared to spend approximately 1.1 hours per day on travel. This is made up of multiple short journeys in less congested locations and fewer longer journeys in more crowded locations. 'Whether the setting is an African village or an American city … the time spent driving was about the same' (Vanderbilt, 2008:131). Marchetti points out that 'throughout history, well before the car, humans sought to keep their commute at about one hour' (cited in Vanderbilt, 2008:132).

Given that most journey legs are of distances under 5 kilometres[17] (Woodward & Lindsay, 2010) with a travel budget of half an hour each way, whether this is by foot, cycle or bus, it is reasonable to suggest that most Hamilton residents for most of their journeys would reach their destinations within this time.

Personal safety

> ***Because society's concerns about keeping children safe carry strong emotions and anxieties, part of the Police role can be to help put the nature of the risk in a proper perspective. Child abduction and murder is, fortunately, rare in New Zealand. The greatest risks to the safety of children are on our roads and in youngsters' homes.*** **(Sanders, 1997)**

In New Zealand the majority (75 percent) of all recorded crime happens in the home. Which suggests that being in public places or travelling by public transport and on the street as a pedestrian or cyclist is safer than many people would believe. Personal safety levels as recorded in national crime statistics for 2008 are higher outside of the home than in it. Police reports show that violence (13.9 percent) and sexual crime (0.9 percent) together total 14.8 percent of all crime, with only one quarter of this total (or 3.5 percent of all crime) happening outside of the home. Public spaces are therefore relatively benign environments and significantly safer than being in private spaces such as homes or motor vehicles. Public concerns around personal safety as a rationale for car use appear therefore to be misplaced and constitute an over-reaction out of proportion with the reality (NZ Police, 2008).

[17] Most journeys are only short distances 'roughly three-quarter were 7km or less; two thirds were 5 km or less and about 31% were 2km or less. (Woodward &Lindsay 2010 :59)

For all respondents in this research personal safety was neither a detrimental factor nor an important issue to consider in their choices to live car-free in Hamilton.

> *I probably would not feel any safer in a car. It is not the sort of feeling you have … It has to do with your personal attitude. If you are used to having a car then logic says you will feel safer in your car. And that you already think that riding a bike or walking around town is unsafe then of course it is unsafe in the middle of the night or something like that. (Peta)*

> *I don't think about it. I've never had trouble that way. There are things like I would not cycle at night on the river path or where it is really dark, but I have no fears there. No particular safety issues just normal sensible precautions. I've never had bad experiences; maybe I'm a bit naïve that way. (Geri)*

> *Hamilton is pretty cruisey, and there's always safety in numbers on a bus. There's normally more than one person there, and Hamilton is a relaxed place really. I've never seen anyone have any problems on a bus in New Zealand; they have in Britain of course. (Hapi)*

The respondents' opinions that Hamilton is a safe place is supported by Waikato Police District Commander Superintendent Allan Boreham stating people who held

> *… the view that Hamilton, particularly the city centre, is an unsafe place were out of balance with reality. Unfortunately, the perception is a lot worse for a lot of people. (Rasmussen, 2009: 6)*

It is this perception of heightened personal danger that the car-free respondents unanimously disagreed with. The general consensus was that a better quality of life is possible without a car and this negated additional risk if any.

> *I've never felt unsafe It's all part of the fear culture we live in. I think more people on the streets make it safer. (Tia)*

> *The way I figure it is, something is gonna happen regardless of the situation. I mean you get car jacked and the rest of it as well, so it depends on what quality of life you want really, whether you want to be scared, or you want to actually enjoy things, … obviously if it is dark I make sure I stay in well lit up areas, and things like that. In Hamilton we are quite lucky, most of it has quite decent bike paths and things, yeah I feel more than comfortable. (Ang)*

One car-free resident rhetorically asks, 'are we getting paranoid about something happening?' Suggesting we are living in a 'cotton wool society'[18], he cautions that because, 'we have become over-protective with our children and ourselves ... if you take these things [the choice to use buses, bikes and feet] away you are poorer for it' (Bill).

The only respondent who reported being a victim of a crime was still *'more than comfortable'* walking home at night. John had been assaulted by a complete stranger one Friday night whilst walking home through Garden Place near the entrance to the underground car park at about 10.30pm.

> *I could have been walking to my car. People believe the worst without knowing the facts, maybe they're just using it as an excuse, I don't know. I got hit in the middle of Hamilton, in front of people; wrong time, wrong place. Doesn't happen every weekend. It's the first time it's ever happened to me. (John)*

He agreed with the suggestion it could have happened to anyone.

> *That's what the Police said. I said what caused it, he said wrong time, wrong place. He said he was on something. And you just happen to be the guy he hit. (John)*

Being assaulted has not discouraged John

> *No, I'm a little bit more careful about my surroundings, and who I talk to. I think a lot has been up on the media as well. I walk the dogs at night, and I walked around Glenview and all those areas. At night, with dogs, or without them, but I haven't seen anything or heard anything untoward. (John)*

While all the respondents in this study have a positive view about their personal safety, Lievore and Mayhew (2008) find it is 'unsurprising' that women, young women in particular, have greater concerns about sexual attacks than other members of the community. However their 'greater concern about assaults from people they know is also well founded' (cited Ministry of Justice 2007). Assaults by someone known to the victim are far more likely to occur in private spaces such as cars or homes than in public places. This is not to suggest any individual situation is necessarily more

[18] Cotton wool society refers to the notion that over protectiveness especially of children leads to sedate risk adverse unadventurous adults.

or less dangerous than another, but it is clear that public spaces accessed for active and public transport are not less safe.

For many parents the 'stranger danger' message has also increased anxiety levels, though Tia (the only respondent currently with a child still at home) warns, 'it's not strangers you've got to be careful of…'

> *A paedophile on every corner sort of thing, oh nah, ridiculous. That's part of the fear-mongering in the media-led discourse about how dangerous this world has become and it's absolute rot. Back in the day when we were walking to school, and if there was a weird guy who stood on the corner, everyone knew about it and he was just the weirdo on the corner kind of thing. (Tia)*

Tia's positive attitude and tolerance of otherness and strangers is possibly more conducive to building a friendlier and safer community than seeing the world as full of danger and strangers as a menace. This positive attitude is shared by all respondents to varying degrees and is possibly a distinguishing characteristic of car-free Hamilton residents. That is; a positive attitude may predispose some individuals to both car-free living and acceptance of difference.

Road safety

In stark contrast to personal safety, concerns about road safety were raised by all participants in this research, with many comments on the advantages of high visibility equipment when out cycling and recurring references to the need for better motorist education in order to make active transport safer.

For the participants the theme of road safety raised some very strong views and statements, as demonstrated by regular bus user, Hapi.

> *The problem with New Zealanders is, because it's a car culture and that's what they're used to ... they barely think they could do without it. … [Motoring is] like smoking, it's a habit, you can break the habit! Break the car habit now! ... Cars, they advertise them as if they were good for you, we know they're dangerous. (Hapi)*

> *For cyclist Peta*
> *… the attitude of car drivers to us cyclists is, you know, I am being treated like an alien basically. And you are being yelled at as they*

drive past. Young people mainly. They open the windows, they yell things or they throw things, rubbish, rotten eggs, apples everything, here in town. (Peta)

The 1950's classic Disney cartoon in which the kind and considerate Mr. Walker becomes mean, nasty and selfish Mr. Wheeler when he gets into his car is an apt description of Hamilton drivers according to Tia and Hapi.

[A]nd the people are just mad, people are nutters. They get behind the wheel of a car and they just ... they change. Hamiltonians are really bad! We are worse than Aucklanders. (Tia)

In my view New Zealand car culture is terrible. There's some really nice people in this country, get them in cars, man, they become morons, and savage killers, and you know, screamers, hooters and bangers. As soon as they get out of the car again, they're ok. (Hapi)

John has similar negative views of New Zealand drivers.

I think drivers in this country are atrocious. They say the black cabs in London are the worst drivers in London, and I'd agree with it. They seem to treat pedestrians as targets. A lot of them are a lot more considerate than your average kiwi driver. (John)

John, who now very happily walks to work in central Hamilton, describes his past experiences of commuting to Auckland for work from Hamilton each day as very dangerous.

[A]nd every day I got home and no-one died was a good day … your chances of dying in a car are a lot better [greater] than winning lotto. ... Everyone seems to be, wants to be, in such a rush to get wherever they are going. They don't think about the consequences. (John)

Without a doubt New Zealand roads are a safety hazard, with an average of more than one person killed on the roads each day. There were 394 road fatalities in the year ending July 2009, plus 30 pedestrian fatalities, and although this is slightly lower than previous years, (having fallen from 401 road deaths and 43 pedestrian deaths in 2008) it is still an atrocious and needless waste of lives (NZTA, 2009).

New Zealand Transport Agency (NZTA) using mortality statistics for 1993 to 1997 found:

Children are among our most vulnerable pedestrians. Far more New Zealand children die as pedestrians on our public roads than die of violence, abuse or neglect; a similar number of children die as

pedestrians as die of all infectious diseases combined. (NZTA, 2000)

For cyclists, whilst the actual number of a fatal accident is small relative to their number, the probability of death or injury is far greater than for motorists or pedestrians, placing cyclists second after motorcyclists in traffic mortality statistics (NZTA 2009). Despite this more recent research using NZTA generated household travel data has shown the health benefits gained from cycling outweigh the higher injury risks. Auckland University researchers Woodward and Lindsay studied the 'likely effects of shifting 5 per cent of urban light- vehicle trips of 7km or less to cycling' their findings predict that annually 116 premature deaths could be avoided by improved health from active commuting on cycles. Increased commuter cycle use, to 1980 levels, would be accompanied with an anticipated 5 additional cycle fatalities which would be balanced with 5.6 less fatalities due to air pollution related factors (Woodward & Lindsay 2010:60)[19]. Overall the higher risk to cyclists is mitigated by substantial health improvements and there is a net social gain in lives saved and health gains from all forms of active transport.

Of the Hamilton car-free research respondents all except one of the participants, cycle often, with three participants stating that cycling is their main mode of transport. Because the participants cycle regularly, they are well aware of the increased dangers of cycling, and advise caution and simple safety measures such as wearing high visibility clothing and using cycle lights to improve safety.

Biking at night time is probably not a very good idea. We make sure we have lights and vests, and our jackets have got fluorescent things, and we stick to the footpaths. (Tia)

[19] Shifting 5 per cent of urban light-vehicle trips of 7km or less to cycling is calculated annually to reduce the nation's fuel consumption by 22 million litres, and reduce transport-related carbon dioxide emissions by 0.35 per cent. It will reduce air pollution deaths by 5.6 p.a. and reduce premature deaths from ill health by 116 lives. The trade off is an estimated 5 additional cyclist fatalities (Woodward & Lindsay 2010).

I've got lights and reflectors and things. I just jump on my bike and away I go. Hamilton is really good. (Ang)

When you talk about safety, what comes to mind is dealing with traffic. When I first came to Hamilton I was riding and a car basically pulled right out in front of me, so my first thought was to get high visibility clothing. It has not happened since. (Cal)

I have modern blinking lights. In England in the old days I used a dynamo which was not that efficient in the wet. (Bill)

Motorists' lack of awareness of the dangers for cyclists was also often cited as a risk factor.

For people in cars to be aware that you are there … you ride up and they are parked where you should be biking. So you've either got to go up on the foot-path or wait for them to do their thing. So just awareness of us other road users. (Ang)

Some drivers think that they are king of the road and road users are only cars. Pedestrians and cyclists do not count. (Seta)

It's the car drivers who are the problem. They threaten and frighten cyclists. (Cal)

Drivers need to be aware of how vulnerable cyclists are. And that they are there. It is the drivers who need educating. Mostly it is cars hitting cyclists not the other way around. … If there were more cyclists on the road and more pure cycle pathways things would be better I think; more safe, more comfortable for cyclists and more fun to cycle. It's such a difference from riding on the roads. Someone might be opening a car door or maybe someone is turning and doesn't see me. And the noise is another factor that makes it not so much fun. (Geri)

Cars also have to adjust their speed if they see a cyclist; it is different from a car because of the speed of cyclists. (Cal)

Although acknowledging that there are safety issues, overall the participants were confident and happy with their transport choices.

New Zealand is still safe. A lot of people say 'be careful,' but New Zealand is a safe place. But we have been around in other places where it is crazy in traffic. So here it is really relaxed. So what if a couple of people yell at you? (Peta)

Confidence and experience of cycling also makes this form of transport safer.

If you are not used to cycling then I can understand why people feel unsafe on a bicycle or say on a roundabout and things like that. If you get used to it in more busy circumstances you get more confident. ... Confidence is more important than anything else. (Seta)

Cyclists can make safer choices using less busy side roads, selecting routes that avoid the busiest areas, and using footpaths and alleyways where possible.

> *Sometimes when it is busy in the morning or afternoons at certain points like the over bridge, I use the footpath. (Peta)*

Although critical of motorists over safety awareness issues, the participants in this research could not be described as anti-motorist. Most have a driver's licence and are willing to use a vehicle for work or when necessary.

> *Generally I think they (drivers) are good. I wear a fluorescent jacket thing, so they can generally see me and I've got my lights on and things. So in general, they are good because they can see you are making an effort to be seen. Yeah they are pretty good. I have had one incident where a guy intentionally drove up really close and yeah… just made a dick of himself, which could have happened in a car. (Ang)*

However the one participant who has never driven nor cycled held the strongest negative views.

> *The biggest disadvantage is fuck'n' drivers; drivers who are out to kill you. Drivers have no respect for pedestrians. The number of people who do not stop at the bloody zebra crossings for me, and it is people of all ages, genders and colours, and the number of drivers who just drive as if there are no pedestrians. Shoot out of the garage! They don't even think you might be walking along the pavement, as you are legally entitled to. They pull right out and the times you nearly get run over is incredible! That's the main disadvantage; the drivers are fuckin' selfish and ignorant. (Hapi)*

Regardless of this critique of motorists and the danger cars may pose to pedestrians and cyclists, the car-free respondents all consider active and public transport to be safer than cars generally. Although there are greater traffic dangers associated with cycling (compared to cars) the health benefits of active commuting clearly outweigh the road safety risks.

School traffic

> ***Everybody enjoys the less congested roads during the school holidays and bemoans the increase in traffic when term starts again.***

(Minister of Transport Pete Hodgson, 2005)

Within New Zealand and in most developed nations the numbers of students being driven to school is increasing (Hinckson, 2006; Ministry of Transport, 2005). In car-dependant nations with increasing levels of vehicle ownership and increasing length and frequency of journeys taken, an increase in the amount of school-related travel is to be expected.

In 2001 the Scottish Government commissioned research into why parents drove their children to school when alternatives were available. The research focus was to fill the 'gaps in an imperfect understanding', *a*nd investigate ways to 'reduce the number of unnecessary car journeys' (Scottish Govt.,2002 section 1.1). The study's initial findings first noted a commonplace acceptance and expectation of children being driven to school. Contributing factors identified included geographic location of the student's 'area of residence', the 'increasing distances to travel to school', safety considerations related to the age and gender of students, and perceived safety of the neighbourhood. 'Increasing numbers of single parents and households where both parents work' (who have greater time management issues) also contributed to the practice, along with the effects of increasing wealth allowing a higher level of car ownership and use (section 3.1.1). The report noted that multiple factors affect families' transport decisions:

> *The proportion of children being driven to school has increased steadily over recent years and this increase is not solely due to demographic and geographic factors. Studies have noted concerns over buses as an alternative to car usage, time pressures, the cost of alternative modes of travel, concerns about danger, concerns about a child's abilities to negotiate traffic and congestion, lack of facilities at school and peer pressure. (Scottish Government 2002, executive summary)*

As the Scottish report suggests, these multiple reasons for the increase in school related traffic make it difficult to address the problem directly. It is also difficult to place exact figures on students' travel modes to school in New Zealand. School transport options will vary within cities and across the country, particularly between rural areas which may or may not have a

dedicated school bus service, and urban areas which may or may not have a greater range of public transport options (such as train, ferry and bus services to cater for school travel. Various reports of the number of students being driven to school in private motor vehicles range from about 39 percent up to 67 percent. For example, data from 505 New Zealand schools participating in the online *Census at School* (2007) program indicates that 39.7 percent of students were driven to school by private motor vehicle. Higher figures are reported by Hinkson et al (2008), with 45.7 percent of school trips in Auckland and the Safekids organisation which refers to '67 percent of trips to school by children made in vehicles' (Safekids, n.d.). Although there are differences, from these figures it would be reasonable to suggest that between half and two thirds of all students are driven to school.

The 2007 *Census at Schools* travel data recorded that there are more students who are being driven to school than those who use active transport modes to travel to school. With somewhere between 40 and 70 percent being driven to school, only 32 percent of students in 2007 cycled or walked to school. As might be expected, the *Census at School* survey indicated that as children got older they were driven to school less. In 2005, 52 percent of year five students were driven to school compared to only 32 percent of year ten students. This was balanced with a 4 percent increase in walking and a larger increase in public transport use by year ten students with trains and buses together increasing from 12.9 percent to 31.5 percent (Census at School, 2005).

Increasingly school related traffic is causing congestion on the roads, resulting in not just traffic problems for road users and parking problems for residents, but more importantly, safety issues for the students. A Hamilton City Council representative observing morning school related traffic at Marion Street School reported seeing illegal parking on bus stops, exceeding parking time limits, parking on yellow lines, pedestrian crossings, footpaths and grass verges, parking over driveways and other inconsiderate driving behaviour. Such behaviour appears to be unrelated

to knowledge of the road rules or of the traffic safety issues around schools collectively:

> *One of the parents spoken to didn't care about her illegal parking and getting an infringement notice – an extremely selfish attitude!!! Her children were okay – never mind about the rest she endangered!*
> *(HCC representative cited in Marion School Newsletter 6th August 2008)*[20]

Car-free respondent Tia whose son goes to another Hamilton primary school reported similar dangerous driving in the school vicinity.

> *It annoys me to see some people dropping their kids off at school. It's dangerous for cars to be stopping in front of the school. There are people that stop on yellow lines, shove their kids out of the car, it's just craziness. It really, really annoys me. (Tia)*

Cautions to parents regarding their travel choices and driving behaviour are a recurring feature in school newsletters and posted on school internet blogs and bulletins nationwide. These warnings noting the effects of school-related congestion and student safety are particularly prominent at the beginning of the new school year and after school breaks.

In these same school newsletters the promotion of active modes of travel to school are also endorsed for health and environmental reasons. An excellent example of this promotion of active transport is the walking school bus advocated at primary schools. Walking school buses are supervised groups of students that daily follow a designated route to and from school, supervised by parents and teachers who act as bus drivers and conductors. This active mode of travel is both safe and healthy for the individual students and reduces congestion particularly around schools, which is beneficial for the community as a whole. Although walking school buses are commended, in 2008 there were only eight walking school bus programmes being run in Hamilton, which represents just one in four of the 32 Hamilton primary schools.

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[20] Further critique of school travel problems is provided in *'Crackdown on Dangerous School Parking*' http://www.wellington.govt.nz/news/display-item.php?id=3351

For Hamiltonians who can generally move around the city without delays, the morning and evening peaks in traffic volumes are exacerbated by school related traffic. The impact of school related traffic on morning and afternoon road congestion levels is evident in comparisons of traffic flows during periods when schools are closed, as John notes.

> *I noticed the difference between school days and school holidays. You could look down the road and think yip, the school holidays are on. You didn't actually have to know when they were, you could tell by the traffic …. You can tell when it's the school holidays simply by the amount of traffic flowing from Te Arawa Street. (John)*

This view of the extent of the school generated traffic problem in Hamilton is supported by the Living Streets submission to the Hamilton City Council.

> *School traffic is well recognised as a major contributor to the appalling congestion on some city roads at peak hours of day. During school holiday periods the traffic subsides to minimal levels. Observations have already been made to this effect by the safer routes coordinator and her research teams, and could be corroborated by anyone who lives near roads affected by the problem (Heaphy Tce, Boundary Rd and Hukanui Rd/Peachgrove Rd are excellent examples, where traffic is blocked in all possible directions on a regular basis). (Living Streets, 2007)*

The noted change in traffic was a recurring comment from respondents in this study, often followed by a comparison with their own modes of transport to school years earlier.

> *Fortunately my parents picked a house that was close to school, well located within 15 minutes walk, so I always walked to school unless I had to carry something heavy or it was really bad weather and then I might get a ride, but I mostly just walked. (Cal)*

> *We never got driven to school, walked 5km in the rain, man you know. Did I drop dead of something? No. (Tia)*

> *I mean, kids now expect it. Some kids don't, some kids have got well grounded parents. But other kids, you mention the word 'walk' to school and they look at you in absolute horror. I had it reasonably easy going to school. My mother used to cycle to Girls High from out at Gordonton. … So things do get progressively easier, but how far do we push it?* (John)

Hamilton car-free resident and father of two daughters Bill lamented this perceived progress, however.

> *I find it a bit sad that four out of five children - same in England I suppose - are taken to school. ... Are we getting paranoid about*

something happening? You should not climb trees now because you might fall or see saws are dangerous. If you take these things away you are poorer for it. We have become over-protective with our children. (Bill)

This point of view suggests that over-protective parents are depriving children of the benefits of active transport. However matters are not quite as simple as Bill's analysis suggests. Road safety is a double edged sword for parents. As more children are driven to school, the safety of pedestrians diminishes due to increased traffic. So more parents will then choose to drive their children to school reducing the number of pedestrians further and in so doing reducing any safety in numbers effect, capturing families in a continuously escalating process. Whilst there is some validity in the arguments about safety, the benefits of active transport on a personal and societal level may well outweigh the safety risks.

Given the high numbers of students travelling in private cars and the notable influence this has on traffic volumes, the promotion of active transport to school such as walking and cycling, will confer many benefits to the student, the parent and the community generally. Besides the many individual health benefits the young student also learns road skills and rules by walking or cycling. This learning is not experienced by students who are passengers in a car. There is also the developmental benefit of experiencing self-controlled mobility in and around the community leading to greater independence. This too has benefits for parents (particularly mothers) who over recent years have often become chauffeurs for their children, adding yet another task in their already busy schedules. The community also benefits on a social and an environmental level due to lower levels of traffic pollution and congestion and from higher levels of safety for students and others who are walking or cycling. Furthermore, greater numbers of pedestrians and cyclists can bring to local parks, streets and shopping centres a vibrant sense of community that is not generated by motor vehicles.

Discussion

Questions concerning time, money, and safety are all important considerations of any activity, particularly transport. Citing school generated traffic problems as one example of often unnecessary travel, the respondents in this research all agree that from a financial, time management or safety perspective living without a car is a wise course of action.

When considering the costs associated with the private motor car, the colloquial expression of 'not sparing the horses' seems to also aptly apply to not sparing the expenses. It is difficult to make a good economic case for car ownership. Cars are expensive, and once purchased they lose value constantly regardless of being well maintained or rarely used. Even if the initial purchase costs are overlooked, (as is the practice with many consumer items) thus negating depreciation costs which amount to approximately 50 percent of per annum vehicle costs (AA, 2010), the ongoing fixed and running costs still mount up. Given that many vehicles are purchased with borrowed finances, the initial cost is even higher and furthermore at some point replacement will be needed and it is clear that most cars are a liability rather than the valuable asset that the high purchase cost suggests.

The health benefits from active transport are often noted and reported but the negative health costs of the alternative, car use, are generally not added to the balance sheet of motoring expenses. Poorer health outcomes due to the sedentary nature of motoring is well noted leading to high additional health costs for the community and to loss of enjoyment of life for the individual. Accidents presented further problems. Lost income due to injury is only 80 percent compensated by Accident Compensation Corporation (ACC, n.d.) and some treatments are only partly funded requiring private insurance or personal funds. This generally means that having a motor vehicle accident even with insurance will still mean a loss of income, additional medical expenses and can lead to higher future

insurance premiums for both personal and motor vehicle insurance cover due to having made a claim.

The level of financial activity associated with motor vehicle travel is phenomenal; the proportion of local government budgets allocated to roads and traffic can be as high as 50 percent[21]. Buckle considers that it even higher, citing the *Coastal Shipping and Modal Freight Choice*, a report commissioned by NZTA, which notes that for central government the road user charges only account for 40 percent of the full annual

> *... costs of providing roading infrastructure. In effect [underfunding] represents a 1.5 billion dollar annual subsidy ... The Treasury values our state highway network at more than $20 billion - and it constitutes only 12% of the total roading network. Roads are the country's most valuable asset. They return nothing. (Buckle, 2009)*

The remaining 88 percent of roads are owned and maintained by local government and is primarily funded by the local residents through rates payments. Regardless of the mode of transport, roads bring benefits to everyone albeit to varying degrees; therefore motorists should not be considered the sole beneficiaries of all roading expenditure. Yet it still needs to be recognised as a substantial external cost of motor vehicle use and a subsidy to motorists generally.

Other external costs associated with vehicle ownership are infringement penalties. Whether these penalties are for parking and stopping for excessive time, moving too fast, or not having the appropriate paperwork for licences, registration and or warrants of fitness, they all contribute to the cost of car usage. *Hamilton City Council 2008/09 Annual Report* states that 3.3 million dollars in infringements and fines were collected in the 2008-2009 year, a large proportion of which was for vehicle offences. While this is a small amount in relation to hundreds of millions spent on roads, or millions invested in CBD parking spaces, it is yet another example of the many and various costs of motor vehicle use to the individual and the community which are often overlooked (HCC, n.d.).

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[21] Auckland City's new transport committee is reported to be responsible for spending half of all Auckland City Council rates income.

Further support of the opinion that motor vehicle expenses are often understated is evident when considering that a large and growing segment of the automotive industry is supplying after-market extras and vehicle modifications. Although these products and services are generally not considered part of running or purchase costs they amount to millions spent annually. An endless list of products from car-fresheners which costs a few dollars to sound systems that may cost many thousands of dollars all purportedly add to the ambiance of driving though they also add to the growing list of external costs. What is unusual is that some of these after-market modifications actually decrease the safety and comfort of motor cars (larger diameter wheels with lower profile tyres and lowered suspension for instance, may add to the appearance but do little for comfort and compromise the manufacturer's safety specifications). When all economic factors are considered a motor vehicle is an extravagance which it is difficult to justify owning from a financial cost-benefit analysis.

There are other factors which are possibly more important than the costs associated with motor vehicle use. Time management is important; busy lives place constant demands on people's time and 'time is money'. That people are busy and that motor vehicles do offer greater freedom of movement is not disputed, but as previous quotes (Illich, 1974; Sloman, 2006; Ker & Tranter, 2003) attest the time involved in earning the finances needed for car ownership and use often mean car users are travelling at a lower speed than maybe achieved by other transport means.

Time management considerations for commuters also need to address the time and day of travel as this will affect the duration of time taken to commute. Week day peak periods are often congested, making car travel slower and in comparison often showing active or public transport as faster modes of transport overall. It may be important to be at a certain location at a certain time, which may not fit public transport time schedules or may be too great a distance to use active transport modes, thus leading to reliance on motor vehicles. However within Hamilton, most journeys

can be achieved by public and active transport modes, which may (depending on traffic conditions) take a longer time period to complete in itself, but when total time spent financing and then completing a journey by car is included, it may in fact be shorter.

Parental concerns about safety prevented young children from walking or cycling unsupervised and consequently this leads to parents driving their children even in situations when they would have walked or cycled themselves at similar ages. The perception that it is safer to drive is misguided in that firstly, automobiles are a dangerous form of transport in themselves and secondly, the streets are safer than most parents realise. Road safety for pedestrians is higher than all other modes of transport; road safety for cyclists is more dangerous than for car users, but the health benefits from active commuting far outweigh the dangers. Given that personal safety outside the home is greater than in the home environment and that the health benefits of active commuting are exceptionally good, the choice to use motor vehicles for safety reasons is unfounded.

School-related traffic has such a noted effect on road congestion that discussion of this phenomenon occurred with all respondents. Unlike transport for other reasons (work, shopping, visiting) the 'school rush' is highlighted in both its presence and absence, with the beginning and ending of the school day and year clearly demarcated from other 'normal' traffic density. Increases in vehicle ownership along with changes to zoning rules and heightened safety concerns have all contributed to an extraordinary growth in school traffic.

There are many advantages in driving children to school; parents are confident their children arrive safely and on time and large amounts of sports equipment, books or projects can be carried in all weathers. Unfortunately the situation has arisen where a private responsibility to get children and their luggage safely to school is becoming a public hazard because our first choice of transport is the private car. Essentially it is

safer and healthier for the community and individuals if students use public and active transport modes to travel to and from school. There are also cost savings for parents/guardians in less car use and time saved by not taking unnecessary journeys.

From an individual perspective the car-free residents have presented a convincing argument and a positive example that active and public transport options do meet the transport requirements of Hamilton commuters. The issues concerning time, money, and safety are clearly addressed here with the conclusion that for time and money to be saved and health improved, all that is required is a bit of planning and a willingness to leave the car behind.

Chapter 5
Obstacles

Introduction

The primary question this thesis attempts to answer concerns the rationality of living car-free in Hamilton. During the research interviews, the car-free respondents were asked to respond to a list of perceived barriers to car-free living, as well as other questions that pertained to their transport choices. Their responses enabled an assessment of the practicality and rationality of their transport choices.

This chapter provides a brief overview of the perceived barriers faced by the respondents, listing ten identified obstacles, along with specific response statements from the participants under each perceived barrier heading. This is followed with a discussion of the rationality (or otherwise) underpinning the choice to live car-free in Hamilton, thereby providing a succinct summation of the transport problems faced by car-free residents and the solutions they employ to overcome any transport barriers.

Barriers and Obstacles

The car-free respondents were asked to respond to a number of perceived barriers and obstacles to living car-free. Following the headings used in the original questionnaires many of the points visited here have been discussed in the preceding chapters. Other questions, which to this point have had only cursory mention, are elaborated. The general response was that the physical and environmental barriers are easily manageable, and that the greatest barrier to living without a private car in Hamilton is personal attitude. This suggests that due to a lack of knowledge or experience of the alternatives to car use by the regular motorist, it will be

difficult to overcome the myths and misconceptions surrounding public and active transport.

Environmental Barriers

Because Hamilton's topography and city size (at present) are conducive to active transport there are no substantial geographic barriers to living car-free. Within Hamilton city, walking, cycling or using public transport were considered by the car-free participants to be efficient and effective transport modes for reaching all their required destinations.

A commuter's perceptions of geographic barriers, their personal attitudes to public and active transport modes and their level of fitness will all influence the decision to use a motor vehicle or not. The perception that a destination is too far to travel by active transport may deter some, though this perception is relative to experience (or the lack of it) according to Peta and Seta, who both consider that experience and practice will change these misconceptions.

> *Too far away, it depends on what is too far away for them. For some it would be too far away but for others, no. It is a matter of getting used to cycling for example. Fitness is important. ... The fitter you are the fewer problems you will have with your distance. (Peta)*
>
> *If [done] every day it is nothing. (Seta)*

Seasonal atmospheric conditions (the presence of rain, wind, or high/low temperatures) do create particular issues, but these are generally surmountable with good clothing and an experience-based understanding that the weather in Hamilton is mostly temperate and rarely, if at all, are active commuters disadvantaged by poor weather conditions.

> *I for one do not like cycling in the rain but you can get used to it and in previous years the number of times I have got wet or that I had to change into wet weather gear was small. (Peta)*
>
> *We have rain jackets of course. If it is really raining, I just accept that I am going to get wet and take a change of clothes. Sometimes if it is really wet I will walk with an umbrella, if I don't want my shoes to get wet or change clothes. (Cal)*

Bugger the weather; if you waited for the weather you would never go anywhere. If you get wet, tough. (Hapi)

Warmer weather and active transport may also require appropriate clothing and wardrobe changes. Carrying a change of clothes or storing clothing at work along with toiletries, wet wipes and towels are also suggested solutions.

I have had a wardrobe at work in the past, but just recently I've just been chucking it in the backpack. Folding them up so they don't get crinkled. (Ang)

Changing rooms and storage facilities are a destination bonus not enjoyed by many, and not considered absolutely necessary if exercise is moderated (at least on the outward journey) and sensible attire is worn.

Time management and time use barriers

Leading busy lives with many objectives to be achieved in several locations on any one day can give rise to increased reliance on the private motor vehicle. However for all the participants this "busy-ness" was a matter of attitude and organisation. They considered that good planning and management could reduce the number of journeys required to function on a daily basis. As Hapi notes 'I'm busy, I can be busy, you just need to organise your busy-ness.'

Planning journeys so as to achieve several objectives will reduce the number of journeys and the overall time spent commuting. Also many journeys are unnecessary, taken at whim due to availability of the motor car, and could be eliminated altogether or greatly reduced. Other necessary journeys can be replaced with alternate modes of travel, such as walking, cycling or by public transport.

Public transport and active transport are generally longer commutes, although not always so in peak times. A further problem with car use is that so much time is exhausted working to help pay for the many costs

associated with car ownership and use that time gained by using a motor vehicle is somewhat negated.

For the respondents, time of day was not a major barrier getting to and from engagements. Working variable hours or outside regular public transport service times certainly would make car-free commuting difficult and for some most unlikely. While an office worker may happily jog home, a shift worker or a physical labourer may not need or want the same level of activity after work. The respondents did not consider this was much of an issue as all worked or studied at regular daytime hours and could happily cycle or walk, or travel by bus. The general response was that travelling at irregular hours late at night or in the dark had only a very minimal deterring influence on their travel choices. They also all thought they could be spontaneous and manage emergencies without a car regardless of time of day.

Alternatives to car use

The notion that there are not enough alternatives to car use was firmly dismissed by all participants, who found no difficulty getting around within Hamilton city. The availability of public transport and active transport options are discussed in detail in preceding chapters.

Economic considerations

Living car-free was unanimously considered a major financial benefit for the participants. The costs of owning and running a motor vehicle were considered to be understated and the external costs and irregular costs often ignored.

Shopping problems

With regard to shopping, John suggests that the big question is, ‘do I really need what I'm going to go get?’ The bonus from asking this question is

that it also 'discourages impromptu spending.' The amount of shopping purchased, which will need to be carried home, is an important consideration when living without a car. The weight, size and number of goods to be carried may be too great for active or public transport. Again this takes organisation and forethought to manage comfortably. One suggested solution to this transport problem is the use of delivery services where possible, especially for larger items - which may not fit into a car either. Hapi humorously suggests cars are not necessarily any better than public transport for carrying large items,

> *I've seen people with all sorts of things on buses ... I don't take my piano in the car; I take it on the bus. (Hapi)*

Making smaller purchases more often, so as to carry only one or two bags at a time, was also suggested. Shopping more often, a little at a time, is a good use of time waiting between buses for Hapi.

> *One late night shopping was a bit of a bastard. [I needed a] taxi from supermarket with shopping. ... Now coming home from work I catch the Orbiter [bus] back to Chartwell. It never connects with next bus, so I just do the shopping 5 days a week instead of twice, a bit at a time. ... Because I've got 30mins to kill between buses, I'm a mall rat now, I should live in the mall, and it's my second home. (Hapi)*

Using cycle saddle-bags and backpacks also makes carrying goods a lot easier for the non-motorist. Although definitely not a fashion icon the small, wheeled personal shopping bags popular with some elderly shoppers was also proffered as a method for making car-free shopping easier.

Equipment cartage

Regularly transporting equipment undoubtedly does create barriers to living car-free. None of the participants had encountered any problems, however. 'The plumber is not coming on the bus' (anon), nor would it be practical for trades people or anyone else to transport loads of goods and equipment, be it band equipment, stage props, or ladders et cetera by public or active transport. Having a boat or other large piece of sports equipment, for example, will make car use absolutely necessary. On-site

storage can provide some limited benefit, storage for golf clubs, or moorings for boats, but would not help when equipment is used at various locations. The respondents did not have any regular need to transport equipment and if cartage was an issue renting or borrowing a vehicle for the particular event was the usual answer.

Facilities

Shower and changing facilities at work, more public seating, bike stands, as well as storage facilities in the city and at recreational sites would from personal experience enhance active transport in Hamilton. Yet none of the participants considered facilities to be an obstacle for them individually, but they did consider that there was a lack of facilities generally and improvements could be made which would make car-free living easier.

Safety/Security

Safety and security are very subjective. What is safe or not, especially for children, is open to debate and depends very much on a person's attitude and experience.

Using a car for safety or security reasons was considered by the respondents to be unnecessary, suggesting that the risks to personal safety or from road dangers were overstated.

> *So it depends on what quality of life you want really. Whether you want to be scared, or you want to actually enjoy things. (Ang)*

Children and dependents

Tia, the only one of the car-free participants who has a dependent child still at home, found no problems with her son's transport needs. He is able to comfortably walk or cycle to most places and occasionally gets rides from his aunt or grandmother (Tia's mother and sister).

> *Being a soccer mum[22] is not a problem. It's just not an issue; I just don't see it as an issue. Having a car is not a necessity. There are always ways around things even though it can be frustrating sometimes. We live in a community and family helps. (Tia)*

The need to transport children, often with many accompanying items of clothing or sustenance, is undoubtedly difficult. It may be nearly impossible to manage without a car if you are responsible for several young children at one time. This situation did not arise for the participants.

Children misbehaving in public generally or being difficult to control on public transport was not considered to be a problem. Higher noise and activity levels when commuting by public transport at school travel times were reported, but this also was not considered to be unusual or unexpected.

Being in poor health or having a sick child or relatives may make car use more likely and in emergencies taxis or a borrowed vehicle could be used.

> *If a sick relative was living with me and we needed trips to hospital, then you probably would look to getting a car, [possibly] a loaner or rental for the duration. (John)*

Public transport service improvements for the elderly and people with disabilities have made reliance on cars (and often an accompanying driver) less necessary and in other situations may provide a superior service.

> *There's a guy who gets the buses very often. He's not only in a wheelchair, he's got at least two other disabilities. And he can't speak properly, but he manages to get the bus from Chartwell to wherever he lives. The drivers roll him down the aisle, they roll him off. I've seen that lots of times, I see a lot more disabled people on buses than I ever used to because they can wheel in and wheel out. (Hapi)*

Often pet owners will transport their animals with them, and this not an option on public transport. In most areas however, walking or cycling with a pet is possible, though perhaps not practical for some animals. John

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[22] Soccer mum refers to a parent who spends a large amount of time and effort supporting and transporting their children to, from and between sporting or social engagements

was the only one of the respondents who mentioned having pets. Whilst visiting friends in the central city, he regularly enjoyed walking his dogs along the river path from his home in Glenview, with positive exercise benefits for dogs and owner.

Social obligations

The disadvantages to living car-free do not necessarily lead to boring mediocrity or limit social encounters. In fact sometimes it can have the opposite effect in some social situations. Not having a car may enable more social encounters, such as bus friends or chance encounters whilst walking. Being car-free is not always socially enabling however, as Hapi demonstrates when he confides that,

> *As a young man, girls tell you to piss off, if you did not have a car. (Hapi)*

And Tia laments that,

> *Sometimes a girlfriend of mine expresses frustration that I can't just pop over there and then. (Tia)*

Never-the-less, all respondents were confident they maintained good social connections, having no difficulty reaching engagements and participating in social events. Whilst a motor vehicle may generate some additional social encounters for the young and adventurous, a greater presence in the community through active and public transport may lead to more social contact overall.

The ten headings may not necessarily encompass the myriad variations of all possible obstacles or barriers to car-free lifestyles but they do provide a substantial overview of the issues involved. The respondents generally dismissed all ten suggested barriers as either manageable/surmountable or misconceptions.

Rationality

> *It's funny how people are with their cars. If everybody didn't use a car, even just one or two days a week, they would be very surprised how easy it is, especially in Hamilton. There are plenty of alternatives to the car, people are just attached. (Tia)*

Personal experiences of car ownership by of all except one of the participants has led to a general consensus among these car-free residents that the problems and issues arising from car ownership far outweigh the problems and difficulties associated with the lack of motor vehicle availability. Overall, the biggest problems with cars are mostly collective while the disadvantages of living without a car are mostly individual. Most Hamilton residents are able to somewhat control the problems associated with individual transport issues yet are limited in their ability to address the collective issues, except in as much as they might limit their individual contribution to the problems. Therefore living car-free and not contributing to transport related problems is considered to be socially responsible by the respondents. 'We are doing society a favour,' says Bill.

Although living car-free in a car-based culture may appear to be an irrational self-imposed hardship, for the participants in this research this was not the case. They argue that on consideration of the available transport options, it is a very rational choice to live without daily reliance on a car. This is not to suggest that motorists are irrational. Other than modestly raising questions to the degree of consideration given by motorists to the full extent of the costs of car ownership, the data from this research does little to further understanding of motorist behaviour, but simply points out that the car-free participants have weighed the advantages and the disadvantages of motor vehicle ownership and based on that analysis have made a conscious choice to live without cars.

From the participants' perspective, some 'standpoint' validity can be attributed to this decision as they, unlike many Hamilton motorists who

habitually drive, have made a conscious choice to experience the alternatives to the dominant mode of transport.

> *…. I don't know if car use is truly a form of false consciousness. I think people have just got so used to it ... (Tia)*

> *It is just the way people have learned to think. I am from a different environment … where people had a different view about public transport. They [kiwi drivers] have not learnt to think in another way…. It depends on how you feel about it. Most people just follow the mainstream, so to say. Or what the local habit is, or what people are expecting you to do. But let's be honest, what the neighbour thinks is his freedom; it is up to him to take the car or not. (Peta)*

> *It's so nice to be out in the fresh air. Most people in summer will go out and be active and really enjoy it, but don't think to jump on a bike or walk to work. (Ang)*

Because we live in a car culture motorists 'cannot conceive of anything else, because they have never considered the alternatives', car use is habit forming warns Hapi, who considers 'that driving is like smoking',

> *it's a habit. You can break the habit ... Break the car habit now! (Hapi)*

Ang, in defence of car drivers, considers some motorists do understand the benefits of being car free 'but they push against the benefits' out of habit. 'It's probably not laziness, it's probably just habit'.

Breaking the 'car habit' is not easy. The motor car is intensively marketed, and promoted as a freedom-enhancing 'extension of your personality', glossing over the high economic costs and the potential hazards of car use.

> *... the ads on TV tell us, that this car is an extension of your personality. Oh my God you have to have this car. Oh it's a great little car, only $20,000. We are marketed the car, and now they are going to pushing the hybrid thing as well, which is a crock if you ask me. (Tia)*

> *Cars, they advertise them just like they were normal. Huh. We know they're not. (Hapi)*

Rightly or wrongly Hapi predicts that with the increasing costs and problems associated with 'world peak oil production', being car-free will

'become more rational' and more widely accepted or possibly 'enforced' because there will not be any alternatives.

> *I don't think they will ever find an alternative for oil. When the oil runs out, which it is doing, the whole car culture is going to collapse. So I'm in advance, I'm the vanguard of the new movement. (Hapi)*

Car-free residents considered unnecessary use of cars as an issue, but acknowledged that there are times when vehicles are needed, such as those that work outside of the city limits or at very irregular hours.

> *Although some jobs require a work car, business hours people don't need cars. (Hapi)*

> *The benefit of cars is convenience in theory. There are some people … driving to the dairy that is in fact only 100 yards down the road. That is silly; I think it is just bone idleness. …It would be great if everyone used a bike for work. I would say if you live within five kilometres of work you should go on your bike or walk. (Bill)*

> *I think if people actually sat down and thought about where they live and how close they are, if it's a five minute walk to the supermarket, or maybe it's ten. Do you go past it every day on your way home, should I jump off the bus one stop early. (John)*

Living with children without a car can create problems and can be 'stressful and frustrating sometimes' Tia admits. However the benefits are 'great', since by walking or using public transport the stresses of driving in the city are avoided.

> *… cars just stress people out. ... Now that I don't have a car, life has slowed down, which is nice. You have time for that thinking while you're biking or walking. (Tia)*

Walking or using public transport is safer than dealing with disruptive children while you drive. When a motorist is concentrating on driving, it is 'more dangerous' warns Hapi 'if you're trying to drive and the kid is distracting you, and they're stuck right next to you.' These stressful situations which increase the risk of accidents whilst driving are avoided in other modes of transport. For Tia and her son the absence of the car and the accompanying negative stress leads to beneficial quality time spent together travelling. She reports some of the most enjoyable times

> *I've ever had in my life have been walking to school and back with my son, you know. It's just so nice.*

They have fun when walking and have

> *... got to know each other really well. So it's good, real good. Motorists miss out on 'quality time,' when they are driving their children from here to there and dropping them off. They are often too busy driving to enjoy the time with their children. (Tia)*

Parking problems is another disadvantage associated with driving that is not encountered with active or public transport. 'A lot of people get by on bicycles now [because] it's easier to park' (Hapi). In Tia's opinion, parking can be stressful and also time consuming. Public transport is often 'quicker when I jump on the Orbiter [bus] I don't have to worry about parking, don't have to worry about traffic. It's great.'

Sometimes walking is even quicker than driving; John who now walks to work after years of commuting by car jokes that 'one of the great things is watching traffic jams as you walk past'. Lifelong cyclist, seventy six year old Bill, notes that another major benefit of the time spent in active commuting is exercise. He attributes his good health and sporting prowess to cycle commuting.

> *There are health benefits ... I think that riding is darn good exercise and that more people should ride bikes. (Bill)*

Daily cycle commuter Ang considers commuting an exercise opportunity too good to miss.

> *With what you've got to do at home, do your chores and things, by the time you are actually organised, it's dark and not really convenient to exercise, so walking to work is a really good time to get your exercise in…. It's basically a waste, if you are able to exercise, to not exercise. I mean at the end of the day or the beginning of the day, getting some fresh air before and after work, and be able to wind down, or if you want be able to focus on what you're doing; it's really helpful to get in the extra exercise. It depends on what quality of life you want really, whether you want to actually enjoy things. (Ang)*

Peta agrees that active commuting has positive health impacts. 'The good thing' he suggests, 'is that you are forced to keep yourself fit; you are automatically staying fit because of the use of the bicycle'. Not only does active transport keep you fit there is also pleasure to be had from the exercise itself. Cal thoroughly enjoys the work-out he gets from cycling …

if I have the time, I like to ride to where I do get a bit of a workout. There's a type of high you get from endorphins when you relax after hard exercise. Yeah I kind of like it - makes me excited or whatever about biking. (Cal)

A further health benefit is the opportunity whilst walking to 'clear the head' of some of the effects of alcohol after an evening's drinking. Cal recalls

'I've been out and had a couple of beers and still cycle home, but if I was feeling really bad I would just walk home. It's good if you can walk off your alcohol level'.

Various responses from respondents noted another alcohol-related advantage of active transport is the lack of risk factors associated with drink-driving for both the individual and the community.

Another thing, you never get caught drunk driving. (Hapi)

And you never have to drink and drive. (Tia)

Car-free respondents also report a sense of community that they consider may not be created by or available to motorists.

I think if more people cycle we will get more of a community happening, more social community feelings going on. (Cal)

… jumping out of a car and going to my desk and sitting down, I probably wouldn't talk as much to the other people. (Ang)

By walking in the neighbourhood regularly you get to 'talk with locals' that otherwise you may simply drive past. You might meet and greet and identify more people when walking or cycling than when in a car or something. (Geri)

'Bus friends' and enjoying discussions with strangers on the buses and in the streets were also reported by the car-free respondents. Another consistent opinion proffered by the respondents was that the wider community, including motorists, also benefit from car-free residents due to their reduced congestion and environmental impacts.

People need to realise that those of us on bikes are saving oil, saving fuel. If you are reasonably fit you are doing society a favour by riding a bike because it is certainly clean and green. One less car on the road. (Bill)

Discussion

Cars are dangerous; driving is stressful and is potentially one of the most lethal activities we undertake on a daily basis. For car-free Hamilton residents these are not risks they want in their lives nor do they wish to inflict these hazards on others in their communities. This rationale for living car-free is supported by recent international studies particularly those recognising transport as a 'social determinant of health' and a major contributor to public health potentially with both positive and negative ramifications (Rissel, 2009; WHO, 2003; Mason, 2000; McCarthy, 1999).

A New Zealand study by Woodward and Lindsay (2010) confirms that the increasing use of cars in New Zealand cities is having an adverse effect on public health and the environment. Working with data from the New Zealand Household Travel Surveys it was found that many car journeys are generally unnecessary and of short duration, manageable by other means. Restricting the analysis to private journeys in urban areas, it is reported that

> *roughly three quarters were 7km or less; two thirds were 5km or less and 31% were 2km or less. (Woodward & Lindsay, 2010:59)*

Given that nearly one in three journeys is less than 2km (approximately 20 minutes walk or less than 10 minutes by cycle) indicates that there is considerable potential for an increase in active transport modes and the corresponding improvements in public health. A small increase, in cycling commutes of 7 kilometres or less is predicted to generate the equivalent of 117 lives saved and significant reductions in fuel consumption and greenhouse gas emissions. Woodward and Lindsay conclude that

> *[i]ncreasing the number of trips undertaken by walking and cycling is an obvious 'win/win' strategy, and the benefits to good health and a safer environment would very likely be substantial. ... we find the health benefits of reduced pollution and increased physical activity would greatly outweigh the costs of injury, by more than ten to one. (Woodward and Lindsay 2010:62)*

Having recognised that cars are not always necessary, car-free residents have made a conscious choice to break the car habit before the choice is

economically and environmentally forced upon them. Their view is that forward thinking is a win/win situation, leading to enjoyment of the benefits of public and active transport and avoiding the pitfalls of private car use and ownership.

There are multiple social goods associated with active commuters and public transport users; they are more likely to shop and socialise locally which is in itself is community building. They have greater opportunities to interact with others on public transport or when out and about walking or cycling. Living without a car enforces activity which is good for health physically, socially and environmentally. Given that cars are a health hazard (carcinogenic and obesogenic), that cars kill hundreds of people each year and maim thousands more, that cars are significantly more expensive than they first appear, that most journeys can be replaced with active or public transport and that most, if not all barriers can be mitigated then to restrict car use or forgo it altogether would appear to be an exceptionally rational choice.

Chapter 7
Conclusions

The purpose for this research was to investigate the experience of living car-free within Hamilton city's urban boundaries. This was undertaken by examining the transport histories of a group of car-free residents in regard to the circumstances, rewards, challenges and constraints they faced. The answers to the thesis questions posed in this project indicate that Hamilton is an ideal city in which to reside without access to a privately owned motor vehicle and that car-free living is both rational and practical at multiple levels. It has economic and environmental rewards, as well as significant potential for community enhancement and improvements in private (and ultimately public) health goals. In the opinion of the respondents in this project, living in Hamilton without a private motor vehicle is therefore beneficial to the individual and the community alike, producing a win/win situation that is completely rational and more easily accomplished than most would consider possible.

By contrast, the research participants view the private motor car as literally an 'iron cage' on wheels, and as an example of the irrationality of rationality (Ritzer, 1998). The regular, everyday, rational transport mode chosen by motorists appears irrational when compared to their own travel mode choices. Rather than confirming the irrationality of living without a car, the supposed rationality of car ownership is itself challenged by these research findings. It is the dominant position afforded to the motorcar in our transport choices that now appears ill-founded.

The participants, although unconnected individuals and couples, have many shared viewpoints, common practices and similar transport histories. Using a 'grounded theory' approach to investigate the transport options and transport histories of the car-free Hamilton resident participants has

uncovered many ideas and themes which are pertinent to understanding transport issues and in particular, sustainable transport issues.

These respondents are not car-free specifically to get fit, to save the environment, or to save money, though all of these goals are important. For the participants walking and cycling, rather than being special events added on to the daily routine, are benign, ordinary, everyday modes of transport. Their greater use of public and active transport modes is a logical consequence of their conscious decision to forego car ownership. Further, it should be noted that many of their shared practices are lifelong; all have been active commuters in the past and most of the respondents have had positive early experiences of public transport. The participants' stories are not yet complete, however. Their experiences provide them with specific insights into appropriate responses and strategies in regard to improving active and public transport options in Hamilton city.

Participants' recommendations

Changes in central and local government policy and the encouragement of public transport as well as promoting one-car households as sustainable and desirable for all Hamilton residents are strategies suggested by the research participants. Although managing for themselves quite comfortably in the current transport environment, these suggestions from the car-free respondents are worthy of further investigation.

At central government level changes to motor vehicle compliance costs may discourage unnecessary travel. John suggests a distance travelled levy to discourage unnecessary motor journeys, as the current structure encourages use, ACC, registration, insurance are levied on a fixed cost basis which could be converted to a 'pay as you drive' system. Distance based motor vehicle insurance policies, available in Australia and some other countries are not as yet available in New Zealand (Victoria Policy Institute, 2004). Further changes in policies that make shared ownership

of motor vehicles easier to administer could also lead to a lower overall vehicle fleet size and savings on a national level.

City planning is critiqued by the participants for being inconsistent. Parking policies are counterproductive to public transport patronage, in that 'it seems odd' that public transport is being promoted 'yet there are still plenty of free parking spaces' (Geri). Moving towards people friendly spaces rather than car friendly spaces will require changes to local by-laws that currently insist on a minimum numbers of parking spaces for housing, retail and commercial developments. These should be revised, allowing for more offsite parking considerations[23] and in some areas discouraging or removing parking all together in exchange for more pedestrian access.

Negative perceptions of public and active transport, both of which are often derided without actual personal experience, will encourage car based transport habits. Historic travel modes with experiences of public and active transport do tend to indicate a greater likelihood of choosing to use these modes and is a common factor among the car-free respondents. If positive experiences of public and active transport are developed then over time a history of habitual use of these modes of transport will generate demand for more and improved infrastructure and services. The effect on patronage of public transport by allowing free buses during the V8 racing was notably impressive. Observations and comments reported from regular bus passenger Hapi that free buses 'opened their eye' to public transport and it's 'convenience[s]' suggests that innovative promotion of public transport will increase patronage. Naturally any free service will be used more than the same service that charges a fee. However the benefits from free buses namely convenience and punctuality due to no money handling and multiple entry and exit points, will increase patronage and relative to current patronage will reduce per passenger subsidy costs. Funding to offset increases in bus

[23] Such as building a parking area at another site to allow greater development of small or valuable land.

subsidies could be derived from the health budget. Funding or at least lobbying from the health services for more active and public transport is warranted due to the high returns for public health generally from reducing car dependence.

De-marketing the car in an attempt to counter some of the prolific influence the motoring industries have, was suggested by one participant as a fun and effective way of reducing car usage.

> *Cars, they advertise them just like they were normal "huh" we know they're not. ... Cars, they advertise them as if they were good for you, we know they're dangerous. (Hapi)*

Wright and Egan support this view suggesting that de-marketing the car 'through targeted propaganda' could provide a low cost method of achieving reductions in car travel, particularly if targeted at 'potential car users at the opinion forming stage during their life cycle' (2000: 287). This would suggest that a programme targeting school children would possibly have the dual benefits of reducing school traffic in the present environment and encouraging the use of alternatives to cars in the next generation of potential drivers.

If people cannot live without cars altogether then car-light, one car families are suggested as an alternative or a first tentative step towards sustainable transport. This research has clearly found proficient exponents of car-free living in Hamilton. While living entirely car-free lifestyles for some may be impossible and for others improbable, for many Hamilton urban residents living a car-free or at least a very car-light lifestyle would be practical and sensible. The potential benefits from vehicle reduction polices are enormous; a car-light objective of one car per household (reduced from the current level of 1.6 cars per household), would reduce vehicle numbers by 37.5 percent, which is similar to pre-1980 levels (NZTA 2006). If achieved, there would be significant improvements to environmental and personal health, along with economic and social advantages for the community. Even with continued population

growth this one policy objective could negate much of the demand for new road construction for decades to come.

With recognition of the many health benefits, and the environmental and economic savings possible by reducing car-use the participants' suggestions (if pursued) will make the transition to a people-friendly, car-light city both desirable and achievable.

Conclusion

This research argues that the personal history of using alternatives to private motor vehicles has generated a positive attitude to active and public transport modes. This leads to increasingly more active and public transport journeys, and the reluctance or refusal by the car-free respondents to rely on or use cars. By contrast, public perceptions and the attitudes of motorists to public and active transport modes reflects a very negative evaluation, suggesting personal histories largely bereft of positive experiences with public and active transport modes. The personal transport histories currently being created by the majority of Hamilton commuters suggest that the primacy of the car will become further embedded unless strategies to address car dependence directly are implemented.

Encouraging greater participation in public and active transport could begin by addressing popular misconceptions that are discouraging uptake of alternatives to the car. Clearly, more positive experiences of a particular activity will encourage more participation. Therefore seeding the transport histories of Hamilton residents with more positive public and active transport experiences will over time generate even larger numbers of public and active transport modal choices. For example, the free buses used during the V8 racing encouraged greater use at the time, but also importantly helped to plant the seed that public transport is pleasant, convenient and efficient for most Hamilton residents and it is anticipated (by this researcher) that it will be used over and over again.

The solutions to private troubles and public issues are historically at odds with each other (Mills, 1959) and nowhere is this more evident than when focusing on alternative modes of transport in a society dominated by car culture. Individuals' desires for motor vehicles to meet transport needs have created a multitude of problems for the community. With public and active transport modes mostly ignored or sidelined, the demand for more roads and more vehicles increases, as do the problems. Because there appears to be little alternative 'is it any wonder that they [motorists] come to be possessed by a sense of the trap' (Mills, 1959:1).

School traffic exemplifies the problems and issues raised in the debate surrounding the need for a private motor vehicle. For time management, personal safety and road safety reasons a private car provides effective transport for children to and from school. For pedestrians and cyclists however, including other pupils, the increase in school-generated traffic makes access more difficult and more dangerous, further discouraging active transport modes. Higher levels of school-generated traffic are a relatively recent phenomenon, though one which has increased exponentially over the last 20 to 25 years along with car-ownership levels generally. This means that most parents of school age children did not get driven to school and can lament the need for it. The significant drop in traffic congestion around schools during school holiday periods is testament to the extent of the problem. Both of these factors combine to highlight firstly that cars are not essential (the parents' generation did not have this need) and second that one particular activity (chauffeuring children to school) can have a profoundly negative impact on the community.

The example that parents are aware of the issues yet still make what would in their youth have been considered unnecessary journeys demonstrates the hegemony of cars in our transport system and the sense of entrapment that comes with it. Our capture by this car-based transport system is at the heart of private troubles regarding transport needs.

The solution requires a different viewpoint, which is something the car-free respondents all possessed. It is not simply a matter of having a positive attitude; the worldview of these car-free respondents is not filtered through a rose-tinted windscreen. Rather than viewing themselves as transport disadvantaged, the car-free non-motorist sees the opportunity to gain health benefits, save money and be an active participant in the community. These advantages of car-free living are presented as real and substantial, implying perhaps that cars should come with the 'health warning: may cause obesity, global warming and feelings of extreme rage and frustration'. This is intended to be viewed as a reality, rather than a humorous quip (Balish, 2006:4).

From this viewpoint it is a disadvantage, not a benefit to own a motor vehicle. Therefore the positive attitudes to non-motorised transport options are a rational outcome when awareness of the advantages of public and active transport are considered and the disadvantages of motor vehicles are fully recognised. For Hamilton residents the results of this research demonstrate that car-free living is beneficial, and that car-free or at least very car-light lifestyles are achievable and a social good worthy of pursuit. Although relatively easily accomplished for most Hamilton households, the question of whether living car-free is a realistic target is difficult to assess due to the varying levels of personal and social investment drivers may have in their cars. This is particularly the case for young people.

Social and recreational transport is the one area that the car-free research respondents found most difficulty with, although this was largely associated with travel beyond the Hamilton urban area or when the need arose to carry recreational equipment which is unlikely to fit on public transport. Regional and inter-urban travel presents the greatest challenge to car-free living since public transport is unavailable to fully meet this demand; heavy reliance on motor vehicles is therefore likely to continue. Consequently, most of those who have vehicles needed only for

occasional or irregular social and recreational travel will, habitually (due to fixed costs of automobile ownership which encourages higher usage) use them even when not really necessary.

Services needed to address this weak link in the car-free mode of transport are scarce, although improving. Daily hire of a motor vehicle for Hamilton car-free residents is possibly the best solution for the occasional out of town journey although of no value to someone who does not drive. The transport difficulties faced in non-metropolitan New Zealand will possibly always be an issue due to small and dispersed populations which are not conducive to regular public transport services of any significance, even for most popular tourist or holiday destinations.

Despite these acknowledged barriers, the car-free respondents who participated in this research have demonstrated that life without a car is a rational and practical choice which brings benefits to the individual and to the community. Their stories affirm that the health and financial bonuses of living without a car for Hamilton residents are real and achievable without any significant lifestyle sacrifices.

This thesis has investigated the previously unexplored terrain associated with an as yet little known or understood group within the community. As such, this research should be regarded as an initial scouting mission rather than a definitive explication of the topic. No other research on car-free commuters within New Zealand currently exists, there has been no previous attempt to define what constitutes being car-free or to distinguish it from being car-light, and little is known about the numbers, circumstances, experiences and histories of car-free residents nationally.

The field is therefore crying out for further research at multiple levels. This ranges from further qualitative investigations into car-free residents in other New Zealand cities to elucidate (or challenge) the many points raised in this thesis. Wellington City for instance, has a higher level of engagement with public and active transport generally compared to other

New Zealand cities. This suggests the existence of greater numbers of car-free residents to consult, providing fertile ground for more investigation. Christchurch has high numbers of cyclists, many of whom may be car-free or very car-light. It also has a gentle topography that would facilitate active commuting and would also, I anticipate, be fruitful in generating further research. The sheer size and hilly topography of Auckland city may discourage active transport, but increased participation in public transport has been actively encouraged by its growing public transport infrastructure. Living car-free in Auckland may yet become more common and research encompassing those sections of the population most likely to adopt such a lifestyle may provide useful insights into appropriate strategies to encourage further extension of the practice. The effects and patronage of recently completed or improved dedicated cycleways in Auckland also warrant examination.

This project has noted one significant element that the participants continue to struggle with – the difficulties associated with recreational travel if it involved leaving the city environs or transporting recreational equipment. There is a distinct lack of public transport between small urban communities and the larger metropolitan cities. Rather than accept this as an insurmountable obstacle, it could be regarded as an opportunity. For example, if the residents of the outlying towns and villages of rural New Zealand are provided with a good inter-city public transport service, the larger centres will benefit from their patronage. Furthermore, visitors to rural areas will no longer be as car dependant which may in turn encourage more local tourism, leading to economic benefits for both urban and rural communities. Research into ways to facilitate such developments appears to fit well with existing sustainable transport strategies promulgated by many local councils.

There is also reason to argue that the time has come for an audit of policies (local and national) around sustainable transport with a view to evaluating matters such as their prevalence and progress, along with the levels of commitment to implementing strategies consistent with the

policies. In their strategic planning, city and regional councils routinely articulate the importance of developing alternative transport options and discouraging further proliferation of private car use in our cities. Funding allocations in support of infrastructure for the different modes of transport might usefully be investigated as a measure of the relative weight given to motorised and non-motorised or public transport.

In conclusion, the concept of living car-free in our car dependent country is an unusual one and seldom pursued by adult New Zealanders. For the participants in this project the benefits of living without a car are clear, tangible and worthy of promotion in the public domain. The advantages are both personal and public and have the potential to deliver improvements in terms of health, wealth and a sustainable transport future – all of which are dependent on the removal of obstacles from the path.

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Appendix 1

Hamilton Press

October 1st 2008, page 7.

Research into challenge of parking up the car

IF your lifestyle choice is to do without private motor transport, even when you could have your own vehicle, Waikato University masters student Bryan Lewis would like to hear from you.

Aged 51 and 100kg, Bryan reckons if he can get around town on a bicycle anyone can, and he's decided to make a study of people who willingly go without motor transport, their motivations and the challenges they face, for his fifth-year master's thesis.

Bryan, whose work has included a psychiatric nurse, a builder and taxi driver is now a social sciences student at Waikato university. He aspires to be car-light rather than car-free, admits Hamilton is mostly built for cars and isn't the easiest place to get around using alternatives like bicycles.

For his research, Bryan has drawn the distinction between being car-free and car-less. Being car-free is a wilful choice; being car-less may be non-voluntary for reasons such as not being able to afford one, or being disqualified by law. "I'm a keen driver, but I'd definitely like to be car-light. One of my friends said that if he did without a car all year he could afford to hire whatever he liked for his Christmas holidays – like a sports car or a campervan."

The things Bryan wants to know from wilfully car-free people include: How they came to live car-free? Is it rational to live car-free in a car-dependent culture? What are the barriers to car-free lifestyles? And if living without a car is the answer what is the question?

Bryan has a couple of possible participants, but needs another six. Anyone interested can contact him through bpl@waikato.ac.nz [sic] or 027 756 4225.

Appendix 2

Department of Societies and Cultures
Faculty of Arts and Social Sciences
Te Kura Kete Aronui
The University of Waikato
Private Bag 3105

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

INFORMATION SHEET

Master of Social Science research project on

Barriers to Car-freedom: investigation of factors affecting car-free (non-car-dependent) Hamilton residents

Thank you for considering participating in this study.

The purpose of this study is to better understand the experience of living car-free in Hamilton. From a car user's point of view, there are many barriers to car-freedom, many reasons that it would be difficult or impossible to forego reliance on a private car. Your transport decisions and the way you manage your transportation needs suggest that car users might not be seeing the whole picture. It is your input on this topic that I seek. I would like to hear about your personal transport history, the reasoning behind your transport decisions and how it affects your daily life – both cost and benefits. I would also like you to respond to a list of barriers to car-freedom that are often cited by car users as genuine reasons for not being car-free.

All this discussion would take place in an interview scheduled to suit your needs. We can undertake the interview in any place that is comfortable for you, as long as it is quiet enough to allow for audio recording of the conversation. I expect that the interview will last for about an hour, though both of us would be free to contact the other if anything needed clarification later on. As a participant you have the right to refuse to answer any particular question and to withdraw from the project without giving reason up to one week after the interview. If you decide to withdraw, all data from the interview will be destroyed.

Prior to commencing the interview I will discuss what is required of you and ensure that you understand your involvement and your options. You will then be asked to sign a consent form agreeing to participate in this study. As I will be collecting personal details, I undertake to keep all records confidential to myself

and my supervisors. To maintain anonymity I will use pseudonyms and alter any other identifying information. At all times information collected in all forms (tapes, notes and transcripts) will be held by the researcher in a securely locked cabinet, or as password protected computer data files. Data will be stored in a digital format for five years and then destroyed.

The findings of the study will be used for the completion of my Masters of Social Science Thesis. Bound copies of the thesis will be held at the University of Waikato Library and in the Department of Societies and Cultures, and a digital version of the thesis will be available via the internet from the University of Waikato library website.

Should you require any further information or clarification please contact me or one of my supervisors.

Contact details

Researcher: **Bryan Lewis**
Phone 027 7564225
Email BPL2@waikato.ac.nz

Supervisors:

Dr. John Paterson
Phone 856 2889 extn 8433
Email: johnp@waikato.ac.nz
Department of Societies and Cultures
University of Waikato
Knighton Rd
HAMILTON

Dr. Maxine Campbell
Phone 856 2889 extn 6115
Email: maxine@waikato..ac.nz

This research has been approved by the Human Research Ethics Committee of the Faculty of Arts and Social Sciences. Any questions about the ethical conduct of this research may be sent to the Secretary of the Committee.

Email: fass-ethics@waikato.ac.nz,
Faculty of Arts and Social Sciences, Te Kura Kete Aronui,
University of Waikato, Te Whare Wananga o Waikato,

Private Bag 3105,
Hamilton 3240.

Thank you for your consideration of this project.

Bryan Lewis

Appendix 3

Interview guide

Check tape recorder is functioning OK
Sample questions/prompts/conversation starters
Personal History
Starting with where and when you were born describe your personal transport experiences.

- Mode of family transport. When you were born what transport did your parents use?
- Were you taken to school?
- Available public transport.
- Other bicycle, boat, horse?

DO NOT TALK SO MUCH ……..Wait for answers
Have you always been car-free?

- Why are you car-free?
- What influences.
- Changes when, where.

How does being car-free impact on domestic and family obligations?

- Your life and other lives.
- Partners, friends, family responses to your car-freedom.
- Life stages, is it, was it, will it be different.
- Can you be spontaneous (is planning ahead of greater importance)
- Alternate uses of time

How do you travel to?

- Work.
- Hours of work.
- Shops.
- Who is responsible for most household shopping?
- Social and business engagements
- Holidays, leisure, recreation.

check tape LISTEN
What is good and what is bad about being car-free in Hamilton
Pros and cons
When hasn't it worked?

- Problems encountered, places, times, circumstances.

Opinions (do not answer own questions)

- Opinion of cars as status symbols
- How come other people have to use a car and you don't?
- Attitude to car-dependence.
- Do car users have a false consciousness of the benefits, conveniences and economics of the privately owned car as transport?
- *Who is rational*?

Listen check tape

- Is social interaction greater with or without car? Eg bus friends
- Opinion of
- Opinion of Hamilton for getting around.
- Opinion of PT.
- Opinion of AT.
- What would make PT and AT better for you.
- Opinion of changing people's attitudes and behaviours.

Check tape recorder

Barriers

What are your recommendations, opinions, strategies in regard to:

1 Environmental Barriers

- Topographical (hills rivers)
- Weather (Seasonal, hot, cold, wet, wind, inconsistent)
- Distance (just to far, problems with connections)
- Obstacles

Check tape LISTEN

2 Chronological factors

- Multitasking
- Unusual irregular hours
- To busy
- PT hours limits

3 Alternatives

- There are none or not enough alternatives to the car
- PT inefficient
- AT not practical for all needs

4 Economic

- (appears cheap to drive)
- PT expensive
- Cost/benefit assumptions

5 Shopping

- Weight, size and number too great for PT
- Home delivery

6 Equipment/

- Need to carry equipment.

7 facilities

- Not enough facilities for AT (showers, lockers, rest rooms)
- Bicycle storage and cartage on PT

Check tape LISTEN

8 Safety/Security

- Personal safety issues at night
- Specific safety issues for women and children
- Stranger danger with AT and PT for children
- PT not door to door

9 Children or other dependents

- Control of children on PT
- Disabled/Elderly to far from bus stop
- Cannot take pets on public transport.
- Health age or disability

10 Social obligations engagements

- Boring mediocre stay at home
- Cannot reach meetings with PT and AT